

232 Series, 5x20 mm, Medium-Acting Fuse



Agency Approvals

Agency	Agency File Number	Ampere Range
	Cartridge: NBK180509-JP1021 A/C NBK020609-JP1021 A/C	1A – 5A 6.3A – 10A
	Leaded: NBK180509-JP1021 B/D NBK020609-JP1021 B/D	1A – 5A 6.3A – 10A
	SU05001-2015* SU05001-2001**	1A – 10A
	N/A	1A – 10A

* - 250 VAC

** - 125 VAC

Electrical Characteristics for Series

% of Ampere Rating	Opening Time
130%	1 hour, Minimum
160%	1 hour, Maximum
200%	2 minutes, Maximum

Electrical Characteristic Specifications by Item

Amp Code	Amp Rating (A)	Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I ² t (A ² sec)	Agency Approvals		
								
001.	1	125/250	10kA @ 125VAC 100A @ 250VAC	0.0923	1.37300	x	x	x
1.25	1.25	125/250		0.0685	4.11000	x	x	x
01.6	1.6	125/250		0.0537	6.96000	x	x	x
002.	2	125/250		0.0370	8.25000	x	x	x
02.5	2.5	125/250		0.0291	13.87500	x	x	x
003.	3	125/250		0.0226	17.19000	x	x	x
3.15	3.15	125/250		0.0215	21.9500	x	x	x
004.	4	125/250		0.0174	37.73000	x	x	x
005.	5	125/250	300A @ 125VAC 100A @ 250VAC	0.0134	56.72000	x	x	x
06.3	6.3	125/250		0.0102	151.54000	x	x	x
008.	8	125/250		0.0076	182.58000	x	x	x
010.	10	125/250		0.0059	290.66500	x	x	x

To order 125Vac rated, please add part no. suffix

Description

The 232 Series Fuse is a 5x20mm, medium-acting, glass body cartridge fuse. It is specifically designed to meet the requirements of Appendix 3 of METI/PSE.

Features

- 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.

Additional Information



Datasheet



Resources



Samples



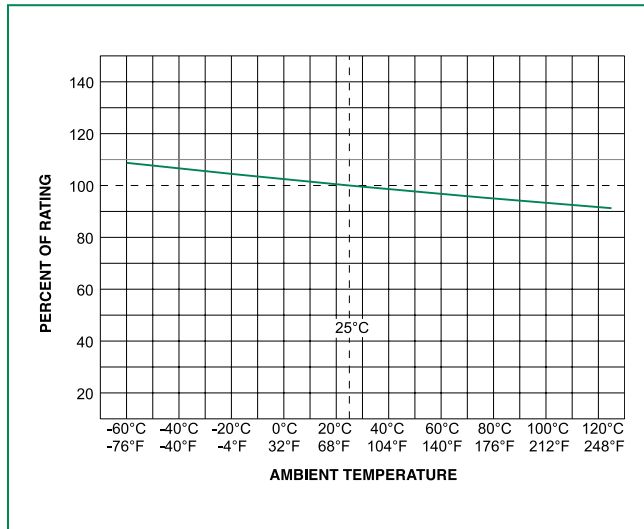
Accessories

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

Axial Lead & Cartridge Fuses

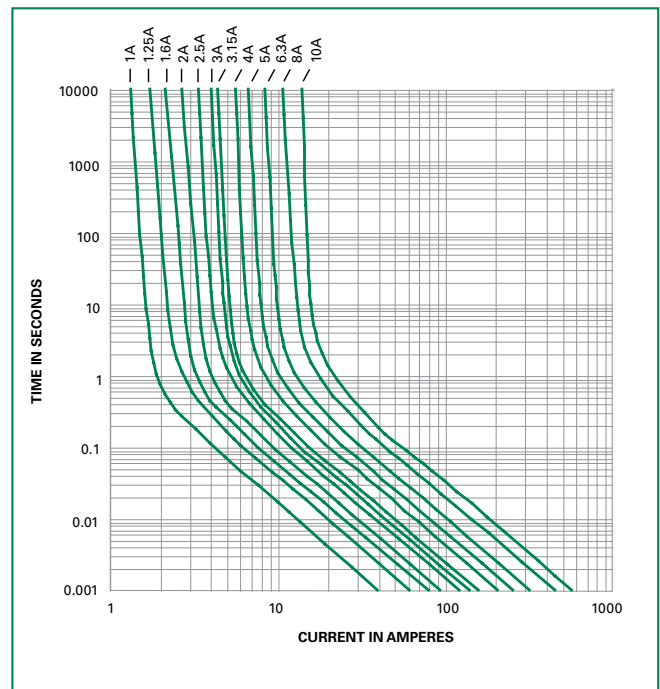
5x20 mm > Medium-Acting > 232 Series

Temperature Re-rating Curve

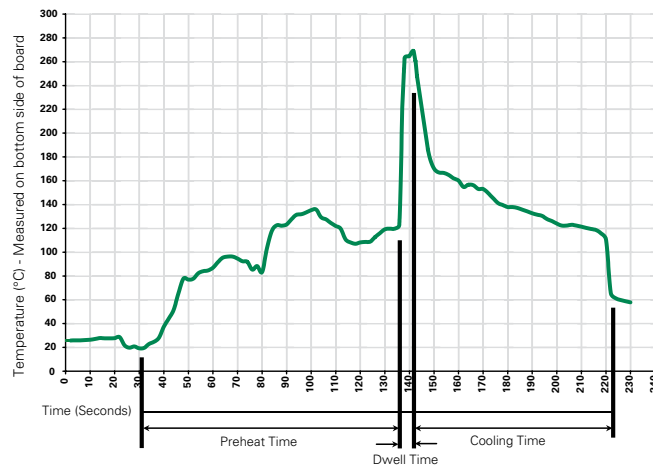


Note:
Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Average Time Current Curves



Soldering Parameters - Wave Soldering



Recommended Process Parameters:

Wave Parameter	Lead-Free Recommendation
Preheat: (Depends on Flux Activation Temperature)	
Temperature Minimum:	100°C (Typical Industry Recommendation)
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.

Packaging

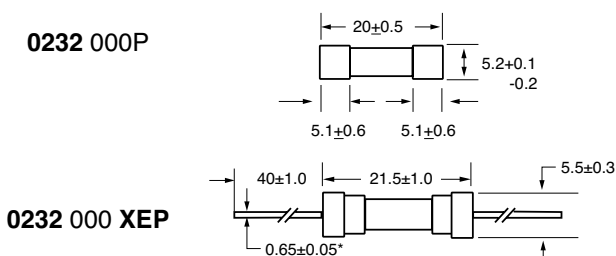
Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
232 Series				
Bulk	N/A	1000	MX	N/A
Bulk	N/A	1000	MXE	N/A

Product Characteristics

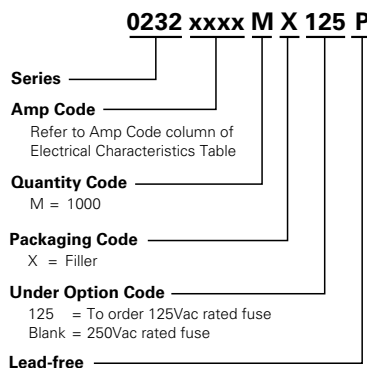
Materials	Body: Glass Cap: Nickel-plated brass Leads: Tin-plated Copper
Terminal Strength	MIL-STD-202, Method 211. Test Condition A
Solderability	MIL-STD-202 Method 208
Product Marking	Cap 1: Brand log, current and voltage ratings, and agency approval Cap 2: Blank
Packaging	Available in Bulk (M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel)

Operating Temperature	-55°C to +125°C
Thermal Shock	MIL-STD-202, Method 107, Test Condition B: (5 cycles -65°C + 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



Part Numbering System



Recommended Accessories

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

Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at: www.littelfuse.com/disclaimer-electronics.