







239 Series, 5×20 mm, Slo-Blo® Fuse



Agency Approvals

Agency	Agency File Number	Ampere Range
	Cartridge: NBK030609-JP1021A	1A – 3.5A
	NBK190609-JP1021A	4A – 5A
	NBK030609-JP1021B	7A
	Leaded: NBK030609-JP1021C	1A – 3.5A
	NBK190609-JP1021B	4A – 5A
	NBK030609-JP1021D	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

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
- RoHS compliant and lead-free
- Available in cartridge and axial lead format

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

Additional Information



Datasheet



Resources



Samples








Accessories

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

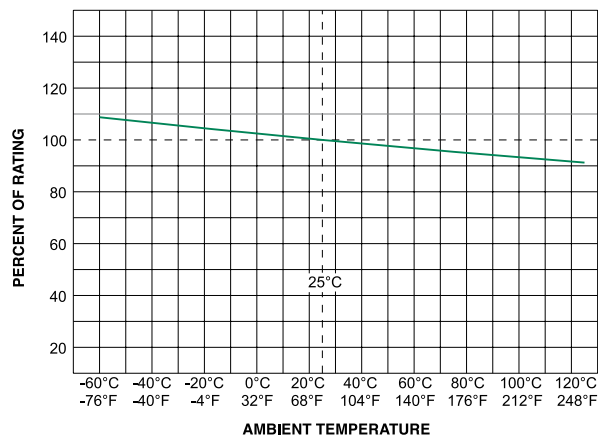
Axial Lead & Cartridge Fuses

5×20 mm > Slo-Blo® Fuse > 239 Series

Electrical Characteristic Specification by Item

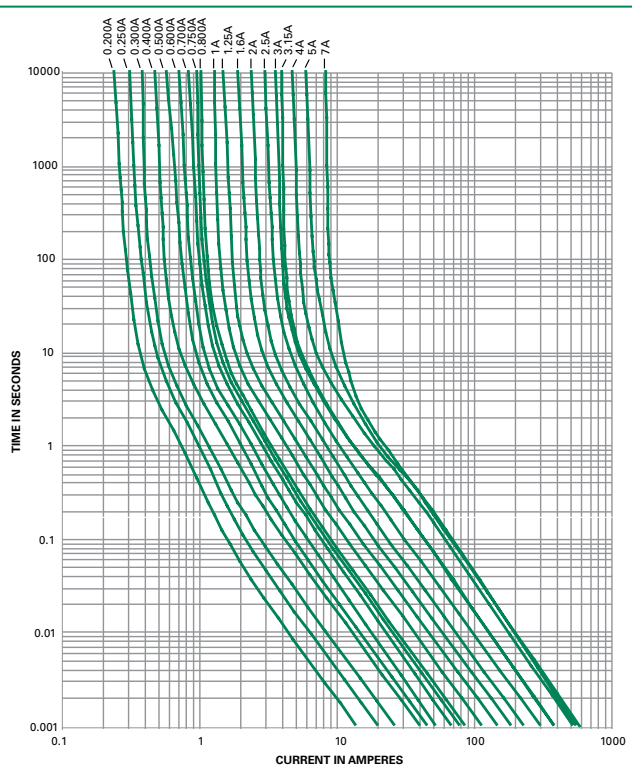
Amp Code	Amp Rating (A)	Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I ² t (A ² sec)	Agency Approvals				
										
.080	0.08	250	35A @ 250 VAC 10kA @ 125 VAC	28.1750	0.02500	x				x
.100	0.1	250		17.3425	0.05500	x				x
.125	0.125	250		11.6000	0.08500	x				x
.150	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	10kA @ 125 VAC 100A @ 250 VAC	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	10kA @ 125 VAC	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

Temperature Re-rating Curve

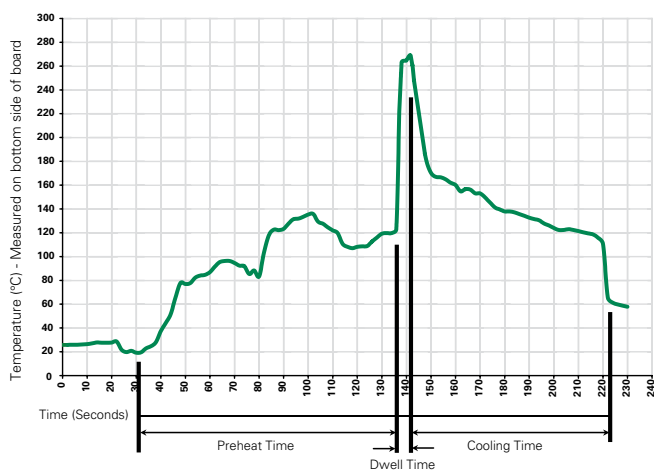


Note:
Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Average Time Current Curves



Soldering Parameters - Wave Soldering



Recommended Process Parameters:

Wave Parameter	Lead-Free Recommendation
Preheat:	
(Depends on Flux Activation Temperature)	(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.

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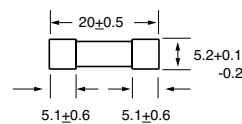
Product Characteristics

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 logo, current and voltage rating Cap 2: Series and agency approval markings

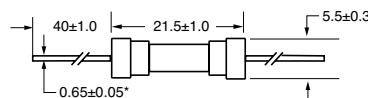
Operating Temperature	–55°C to +125°C
Thermal Shock	MIL-STD-202, Method 107, Test Condition B: (5 cycles –65°C to +125°C)
Vibration	MIL-STD-202, Method 201
Humidity	MIL-STD-202, Method 103, Test Condition A. high RH (95%) and elevated temp (40°C) for 240 hours
Salt Spray	MIL-STD-202, Method 101, Test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

Dimensions

0239 000P



0239 000XEP



All dimensions in mm

Notes:

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

Part Numbering System

0239 xxxx M X P

Series

Amp Code

Refer to Amp Code column of Electrical Characteristics Table

Quantity Code

M = 1000

Packaging Code

X = Filler

Lead-free

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
239 Series				
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	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:

- 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.