232 Series, 5×20 mm, Medium-Acting Fuse

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 DENAN Technical Requirements & Enforcement Regulations (METI).

Features

- Available in cartridge and axial lead format
- RoHS compliant and lead-free
- Approved to DENAN's Appendix 3

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
PSE	Cartridge: NBK180509-JP1021 A/C NBK020609-JP1021 A/C Leaded: NBK180509-JP1021 B/D NBK020609-JP1021 B/D	1A – 5A 6.3A – 10A 1A – 5A 6.3A – 10A
KC	SU05001-2015	1A – 10A
CE	N/A	1A – 10A

Additional Information

Datasheet | Resources | Samples | Accessories

For recommended fuse accessories for this product series, see 'Recommended Accessories' section.

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^2t (A^2 sec)	Agency Approvals		
						PSE	KC	CE
001.	1	125/250	10 kA @ 125VAC	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		0.0134	56.72000	x	x	x
06.3	6.3	125/250	300A @ 125VAC	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
* Interrupting Rating for 8A & 10A is 100A@250Vac

Application testing is strongly recommended.

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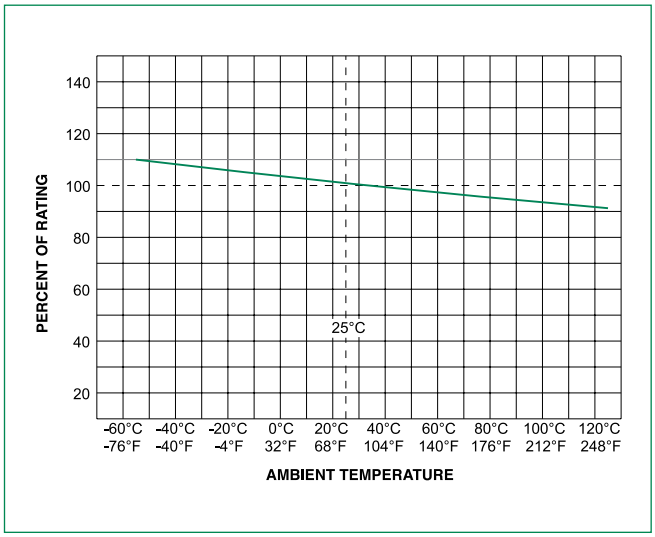
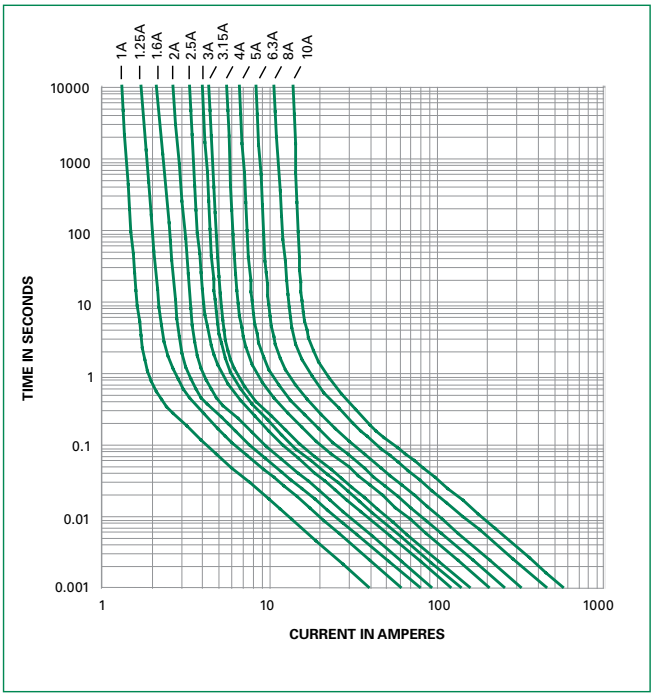
Temperature Re-rating Curve

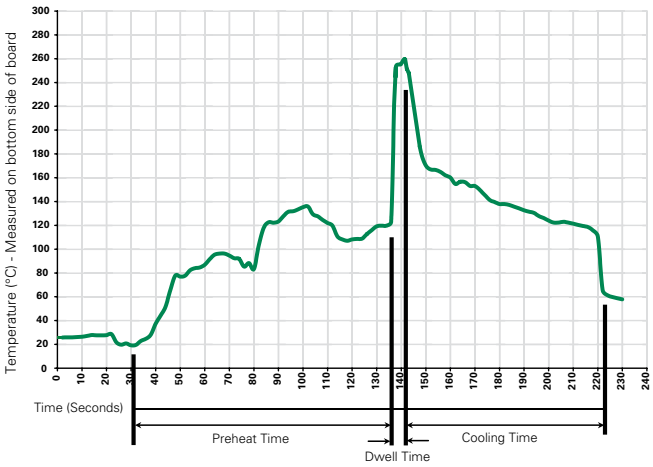


Note:
Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

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.

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

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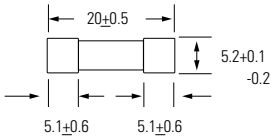
Product Characteristics

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 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)

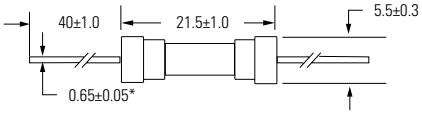
Operating Temperature	–60°C to +125°C
Thermal Shock	MIL-STD-202, Method 107, Test Condition B: (5 cycles –65°C + 125°C)
Vibration	MIL-STD-202, Method 201
Humidity	MIL-STD-202, Method 103, Test Condition A high RH (95%) and elevated temperature (40° C) for 240 hours.
Salt Spray	MIL-STD-202, Method 101, Test Condition B

Dimensions

0232 000P



0232 000 XEP



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

All dimensions in mm

Part Numbering System

0232 xxxx M X 125 P

Series

Amp Code
Refer to Amp Code column of Electrical Characteristics Table

Quantity Code
M = 1000

Packaging Code
X = Filler

Under Option Code
125 = To order 125Vac rated fuse
Blank = 250Vac rated fuse

Lead-free

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.

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