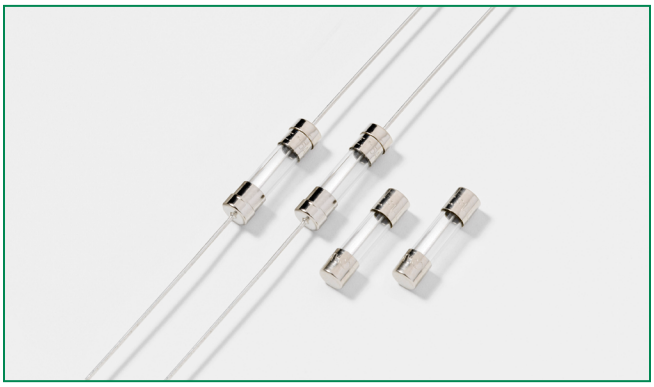
218 Series, 5×20 mm, Time-Lag (Slo-Blo®) Fuse



Agency Approvals

Agency	Agency File Number	Ampere Range
PS E	Cartridge Certificates: NBK090205-E10480A NBK120802-E10480C Leaded Certificates: NBK090205-E10480B NBK120802-E10480D	1A – 5A 6.3A – 15A 1A – 5A 6.3A – 15A
CCC	Certificates: 2005010207145715	32mA – 6.3A
KC	Certificates: SU05001-3005 SU05001-2008 SU05001-2009	32mA – 40mA 50mA – 800mA 1A – 10A
UL	Recognised File: E10480 Guide: JDYX2	32mA – 16A
CSA	File: 029862 Acc. Class: LR1422-30	32mA – 15A
SEMKO	File: 1402476	32mA – 6.3A
VDE	License: 40013496	32mA – 10A
VDE	License: 40016604	15A*
FIMKO	License: KM41462	80mA – 6.3A
CE		32mA – 16A

* Approval for Cartridge versions only

Description

5×20mm Time-Lag glass body cartridge fuse designed to IEC specification.

Features

- Designed to International (IEC) Standards for use globally
- Meets the IEC 60127-2, Sheet 3 specification for Time-Lag fuses
- Available in cartridge and axial lead form
- 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**

Electrical Characteristics

% of Ampere Rating	Ampere Rating	Opening Time
150%	32mA–100mA	60 minutes, Minimum
	125mA-6.3A	60 minutes, Minimum
	8A-15A	30 minutes, Minimum
210%	32mA-100mA	120 sec., Maximum
	125mA-6.3A	120 sec., Maximum
	8A-15A	120 sec., Maximum
275%	32mA-100mA	200 ms., Min.; 10 sec. Max.
	125mA-6.3A	600 ms., Min.; 10 sec. Max.
	8A-15A	600 ms., Min.; 10 sec. Max.
400%	32mA-100mA	40 ms., Min.; 3 sec. Max.
	125mA-6.3A	150 ms., Min.; 3 sec. Max.
	8A-15A	150 ms., Min.; 3 sec. Max.
1000%	32mA-100mA	10 ms., Min.; 300 ms. Max.
	125mA-6.3A	20 ms., Min.; 300 ms. Max.
	8A-15A	20 ms., Min.; 300 ms. Max.

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Axial Lead & Cartridge Fuses

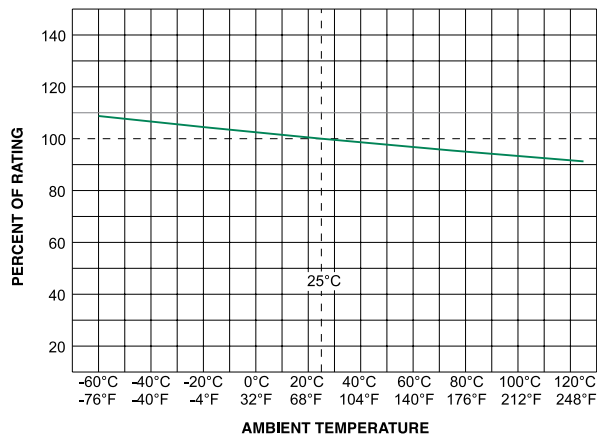
5×20 mm > Time-Lag > 218 Series

Electrical Characteristics

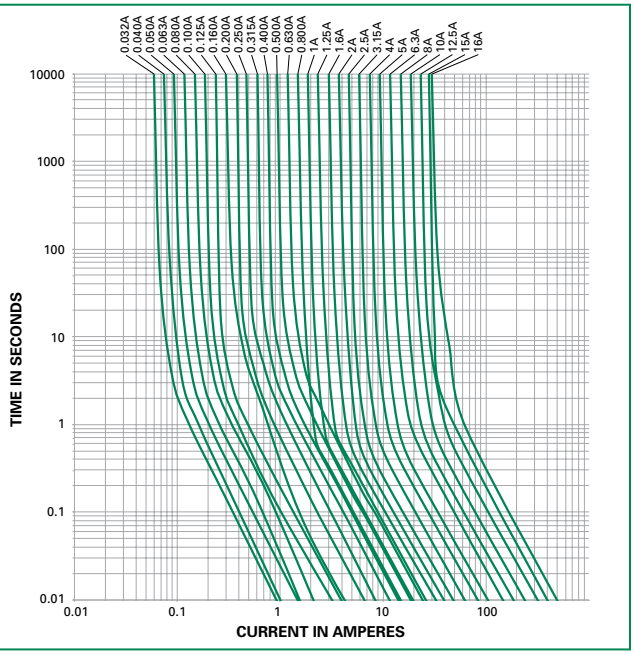
Amp Code	Amp Rating (A)	Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I^2t (A^2 sec)	Maximum Voltage Drop at Rated Current (mV)	Maximum Power Dissipation At 1.5In(W)	Agency Approvals								
.032	0.032	250		48.2580	0.01100	5000	1.6		x	x		x	x	x	x	x
.040	0.04	250		31.8620	0.01100	4000	1.6		x	x		x	x	x	x	x
.050	0.05	250		21.2920	0.01700	3500	1.6		x	x		x	x	x	x	x
.063	0.063	250		14.2680	0.02800	3000	1.6		x	x		x	x	x	x	x
.080	0.08	250		9.0700	0.07500	2500	1.6	x	x	x		x	x	x	x	x
.100	0.1	250		6.0180	0.07900	2000	1.6	x	x	x		x	x	x	x	x
.125	0.125	250		4.2000	0.1465	1900	1.6	x	x	x		x	x	x	x	x
.160	0.16	250		3.7000	0.14400	1500	1.6	x	x	x		x	x	x	x	x
.200	0.2	250		1.6000	0.3410	1300	1.6	x	x	x		x	x	x	x	x
.250	0.25	250		1.0495	0.5405	1100	1.6	x	x	x		x	x	x	x	x
.315	0.315	250	35 A @ 250 VAC	0.8475	1.1100	1000	1.6	x	x	x		x	x	x	x	x
.400	0.4	250		0.5350	1.3250	900	1.6	x	x	x		x	x	x	x	x
.500	0.5	250		0.3700	2.8250	300	1.6	x	x	x		x	x	x	x	x
.630	0.63	250		0.2750	4.6750	250	1.6	x	x	x		x	x	x	x	x
.800	0.8	250		0.0813	3.370	150	1.6	x	x	x		x	x	x	x	x
001.	1	250		0.0613	6.730	150	1.6	x	x	x	x	x	x	x	x	x
1.25	1.25	250		0.0446	12.650	150	1.6	x	x	x	x	x	x	x	x	x
01.6	1.6	250		0.0336	23.350	150	1.6	x	x	x	x	x	x	x	x	x
002.	2	250		0.0293	14.450	150	1.6	x	x	x	x	x	x	x	x	x
02.5	2.5	250		0.0219	23.250	120	1.6	x	x	x	x	x	x	x	x	x
3.15	3.15	250		0.0173	38.150	100	1.6	x	x	x	x	x	x	x	x	x
004.	4	250	40 A @ 250 VAC	0.0129	69.10	100	1.6	x	x	x	x	x	x	x	x	x
005.	5	250	50 A @ 250 VAC	0.0104	111.00	100	1.6	x	x	x	x	x	x	x	x	x
06.3	6.3	250	63 A @ 250 VAC	0.0076	198.50	100	1.6	x	x	x	x	x	x	x	x	x
008.	8	250	80 A @ 250 VAC	0.0059	341.50	100	4		x		x	x	x		x	x
010.	10	250	100 A @ 250 VAC	0.0045	568.00	100	4		x		x	x	x		x	x
12.5	12.5	250	63 A @ 250 VAC	0.0034	889.00	100	4				x	x			x	
015.	15	250	100 A @ 250 VAC	0.0028	1405.00	100	4				x	x	x		x	x*
016.	16	250	63 A @ 250 VAC	0.0021	1955.00	100	4					x			x	

* Approval for cartidge versions only

Temperature Rerating Curve



Average Time Current Curves



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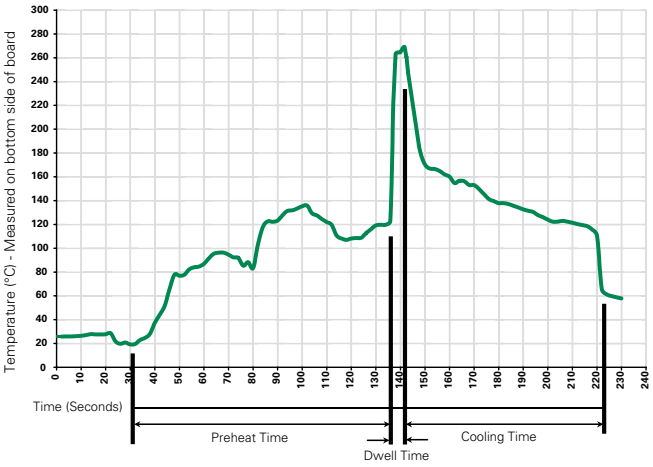
Soldering Parameters - Wave Soldering



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

Material	**Body:** Glass **Cap:** Nickel–plated Brass **Leads:** Tin–plated Copper
Terminal Strength	MIL-STD-202G, Method 211A, Test Condition A
Solderability	Reference IEC 60127 Second Edition 2003-01 Annex A
Product Marking	**Cap1:** Brand logo, current and voltage ratings **Cap2:** Agency approval marks
Packaging	Available in Bulk (M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel)

Operating Temperature	–55ºC to +125ºC
Thermal Shock	MIL-STD-202G, Method 107G, Test Condition B (5 cycles, –65˚C to +125˚C)
Vibration	MIL-STD-202G, Method 201A
Humidity	MIL-STD-202G, Method 103B, Test Condition A (High RH (95%) and elevated temperature (40˚C) for 240 hours)
Salt Spray	MIL-STD-202G, Method 101D, Test Condition B

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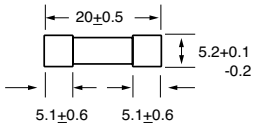
Axial Lead & Cartridge Fuses

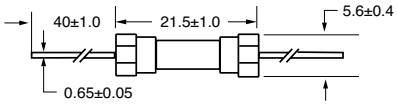
5×20 mm > Time-Lag > 218 Series

Dimensions

0218 000P



0218.032 **XEP**
to
0218.100**XEP**



0218.125 **XEP**
to
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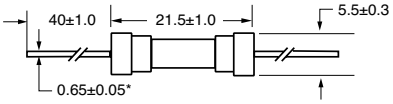

All dimensions in mm

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

Part Numbering System

0218 xxxx M X E P

Series

Amp Code
Refer to Amp Code column of Electrical Characteristics Table

Quantity Code
M = 1000

Packaging Code
X = Filler

Option Codes
Blank : Cartidge Type Fuse
E : Axial Lead Fuse

Lead-free

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
218 Series				
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")
Bulk	N/A	1000	MXG	N/A
Bulk	N/A	1000	MXB	N/A
Bulk	N/A	100	HX	N/A

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