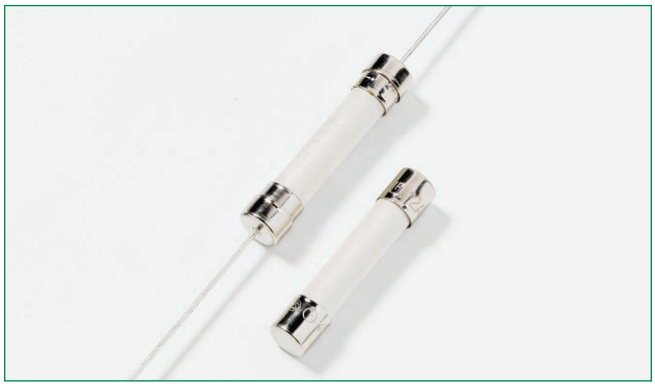
314/324 Series Lead-free 3AB, Fast-Acting Fuse



Description

The 3AB Fast-Acting Fuse with ceramic body construction permits higher interrupting ratings and voltage ratings. Ideal for applications where high current loads are expected.

Features

- In accordance with UL Standard 248-14
- Available in cartridge and axial lead format and with various forming dimensions
- RoHS compliant and Lead-free
- UL Listed and Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14
- Conforms to DENAN's Appendix 3
- Conforms to EN 60127-1 and EN 60127-7 (15A, 20A only)

Agency Approvals

Agency	Agency File Number	Ampere Range
UL	E10480	0.375A - 15A
CSA	29862	0.375A - 20A
cULus	E10480	20A - 40A
PSE	314 Series: NBK030805-E10480A NBK030805-E10480C NBK030805-E10480E NBK260106-JP1021A 324 Series: NBK030805-E10480B NBK030805-E10480D NBK030805-E10480F NBK260106-JP1021B	1A - 3.5A 4A - 5A 6A - 15A 20A - 30A 1A - 3.5A 4A - 5A 6A - 15A 20A - 30A
KC	SU05001-6003 SU05001-6001 SU05001-7006 SU05001-8002 SU05001-8003 SU05001-6002	3A 4-6A 7-10A 12-15A 20A 25-30A
CE	N/A	0.375A - 30A
EAC	J 50440217	*15A/*20A

* - Approved for axial leaded version only.

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 Rating	Opening Time
100%	0.375 - 40	4 hours, Minimum
135%	0.375 - 30	1 hour, Maximum
200%	0.375 - 12	15 secs., Maximum
	15 - 30	30 secs., Maximum
250%	40	30 secs., Maximum

Additional Information

Datasheet 314 Series
Resources 314 Series
Samples 314 Series
Accessories 314 & 324 Series
Datasheet 324 Series
Resources 324 Series
Samples 324 Series

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

Axial Lead & Cartridge Fuses

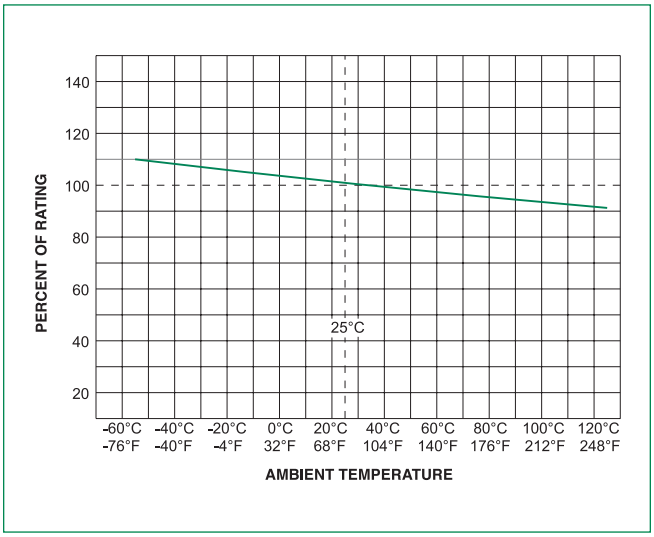
3AB > Fast-Acting > 314/324 Series

Electrical Specification by Item

Amp Code	Ampere Rating (A)	Voltage Rating (V)	Interrupting Rating+	Nominal Cold Resistance (Ohms)	Nominal Melting I²t (A² sec)***	Agency Approvals						
						UL	CSA	KC	cULus	PSE	CE	
.375	0.375	250	35 A @ 250 VAC 10 kA @ 125 VAC 10 kA @ 125 VDC	0.820	0.210	x	x	-	-	-	x	-
.500	0.5	250		0.500	0.639	x	x	-	-	-	x	-
.750	0.75	250		0.250	2.061	x	x	-	-	-	x	-
001.	1	250	100 A @ 250 VAC 10 kA @ 125 VAC 10 kA @ 125 VDC	0.189	0.690	x	x	-	-	x	x	-
002.	2	250		0.0700	5.700	x	x	-	-	x	x	-
003.	3	250		0.0432	14.6	x	x	x	-	x	x	-
004.	4	250	750 A @ 250 VAC 10 kA @ 125 VAC 10 kA @ 125 VDC	0.0470	10.4	x	x	x	-	x	x	-
005.	5	250		0.0300	26.0	x	x	x	-	x	x	-
006.	6	250		0.0240	45.0	x	x	x	-	x	x	-
007.	7	250		0.0187	71.0	x	x	x	-	x	x	-
008.	8	250		0.0153	105	x	x	x	-	x	x	-
010.	10	250		0.0105	206	x	x	x	-	x	x	-
010.*	10	280		0.0105	206	-	-	-	x	-	x	-
012.	12	250		0.00760	570	x	x	x	-	x	x	-
015.	15	250		0.00505	292	x	x	x	-	x	x	x****
015.*	15	280		0.00505	292	-			x		x	-
020.	20	250	1000 A @ 250 VAC 200 A @ 300 VAC 10 kA @ 125 VAC 10 kA @ 125 VDC	0.00355	631	-	x	x	x	x	x	x****
020.*	20	280		0.00355	631	-	-	-	x	-	x	-
025.	25	250	100 A @ 250 VAC 1000 A @ 75 VDC 400 A @ 125 VAC 400 A @ 125 VDC	0.00235	1450	-	-	x	x	x	x	-
025.**	25	280		0.00235	1450	-	-	-	x	-	x	-
030.	30	250		0.00182	2490	-	-	x	x	x	x	-
040.	40	250	1000 A @ 250 VAC 400 A @ 150 VDC	0.0014	22925	-	-	-	x	-	x	-

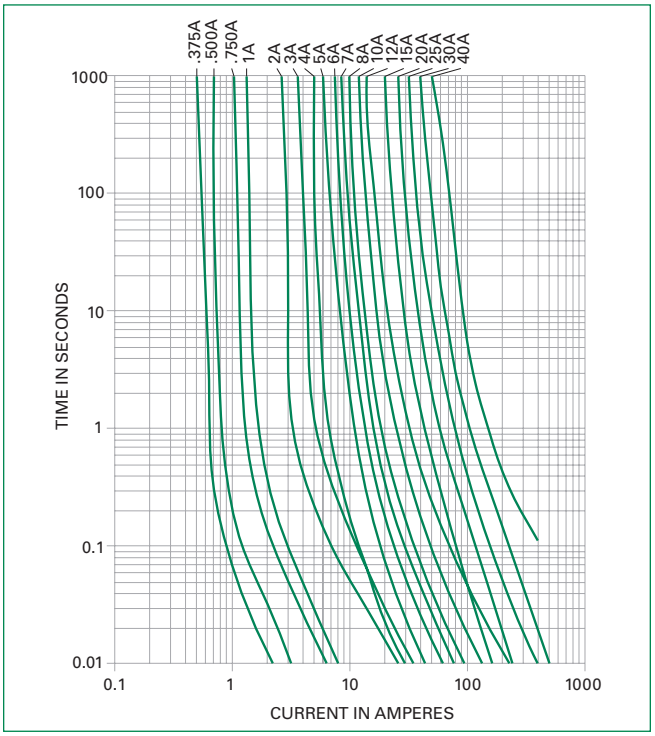
***** 350A@280VAC interrupting rating available for 10A, 15A and 20A.
****** 50A@280VAC for 25A. Add suffix '280'. Example: 0324020.MX280P.
*******I^2t test at 10x rated current
********Approved for axial leaded versions only, and interrupting rating is 750A@250Vac for 15A,1000A@250Vac for 20A
+ - Interrupting Rating may differ based on Agency Approval. See Agency Approval certificate for more details.

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

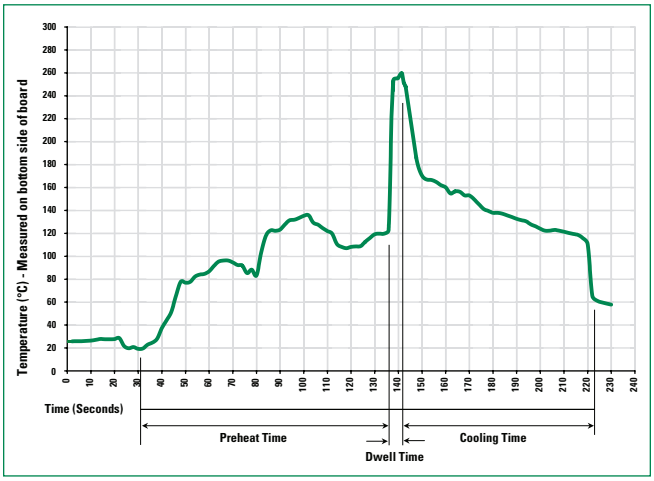


Revised: GD. 10/21/20

Axial Lead & Cartridge Fuses

3AB > Fast-Acting > 314/324 Series

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.

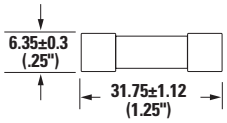
Product Characteristics

Materials	**Body:** Ceramic **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	**Cap1:** Brand logo, current and voltage ratings **Cap2:** Series and agency approval marks

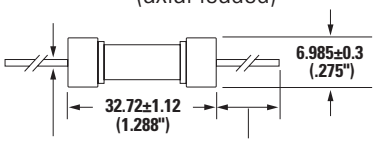
Operating Temperature	–55°C to +125°C
Thermal Shock	MIL-STD-202, Method 107, Test Condition B (5 cycles, -65°C to +125°C)
Vibration	MIL-STD-202, Method 201
Humidity	MIL-STD-202, Method 103, Test Condition A (High RH (95%) and Elevated temperature (40°C) for 240 hours)
Salt Spray	MIL- STD-202, Method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

Dimensions

314 000P Series
(cartridge)



324 000P Series
(axial leaded)



Axial Lead Diameter:
0.81±0.05 (.032") for (0.375A - 15A)
1.02±0.06 (.040") for (20A - 40A)

Axial Lead Length:
38.1±3.15 (1.50") TYP.
52±3 (2.0") for Long Lead

Axial Lead Material:
Tin-coated copper

Measurements displayed in millimeters (inches)

Part Numbering System

0314 xxxx M X P

Series
314 = Cartridge
324 = Axial Leaded

Amp Code
Refer to Amp Code column of Electrical Specification Table

Quantity Code
M = 1000

Packaging Code
X = Filler

Lead-free

Revised: GD. 10/21/20

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
314 Series				
Bulk	N/A	5	VX	N/A
Bulk	N/A	100	HX	N/A
Bulk	N/A	1000	MX	N/A
Bulk	N/A	1000	MX52L (long lead)	N/A
Bulk	N/A	1000	MXCC	N/A
Bulk	N/A	1000	MX52LE (long lead)	N/A
324 Series				
Bulk	N/A	5	VX	N/A
Bulk	N/A	100	HX	N/A
Bulk	N/A	1000	MX	N/A
Bulk	N/A	1000	MX280	N/A
Bulk	N/A	1000	MX52L	N/A
Bulk	N/A	1000	MXF24	N/A

Recommended Accessories

Accessory Type	Series	Description	Max Application Voltage	Max Application Amperage
Holder	155100	Twist-Lock In-Line Fuseholder	32	20
	342	Traditional Panel Mount Fuseholder	250	20
	346	Panel Mount Flip-Top Shock-Safe Fuseholder	250	15
	345	Shock-Safe Fuseholder with PC Mount, Solder Mount and Panel Mount options	250	20
Block	354	Low Profile OMNI-BLOK® Fuse Block	600	30
	359	High Current Screw Terminal Fuse Block		30
Clip	122	High Current Traditional PC Board Fuse Clip	1000	30
	101	Rivet/Eyelet Type Fuse Clip	1000	15

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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Littelfuse:

0324.125MXP 0324025.HXP 0324030.MXP 0324010.HXP 0324.375MXP 0314006.HXP 0314030.HXP 0314004.HXP 0324.125HXP 0314020.HXP 0324001.MXP 0314006.MXP 0314015.HXP 0324006.HXP 0324030.HXP 0314.500HXP 0314008.MXP 0324003.MXP 0324006.MXP 0314007.MXP 0314012.HXP 0314025.MXP 0324007.MXP 0324008.HXP 0324005.HXP 0324025.MXP 0314.125MXP 0324.500HXP 0324002.MXP 0314.375HXP 0324010.MXP 0314.750HXP 0314.750MXP 0314012.MXP 0324012.HXP 0314004.MXP 0314010.HXP 0324005.MXP 0324003.HXP 0314025.HXP 0314030.MXP 0314.125HXP 0324.500MXP 0314025.MX52LP 0324040.MXP 0324012.MXP 0324008.MXP 0324004.HXP 0324015.HXP 0324001.HXP 0314010.MXP 0314001.MXP 0324.750MXP 0324020.MXP 0324.750HXP 0314.375MXP 0314005.MXP 0324.250MXP 0324004.MXP 0314.250HXP 0324015.MXP 0314003.HXP 0314008.HXP 0314.250MXP 0314015.MXP 0314020.MXP 0314001.HXP 0314007.HXP 0324007.HXP 0314.500MXP 0314002.HXP 0314002.MXP 0324002.HXP 0314003.MXP 0314005.HXP 0324.250HXP 0324.375HXP 0324020.HXP 0314010.MXANP 0314015.MXANP 0314012.MXANP 0324025.MX280P 0324020.MX280P 0314002.VXP 0314003.VXP 0314015.VXP 0314.500VXP 0314001.VXP 0314012.VXP 0314010.VXP 0314008.VXP 0314005.VXP 0314004.VXP 0314006.VXP 0314025.VXP 0314030.VXP 0314020.VXP 0314.750VXP 0324003.VXP 0324007.VXP