

224/225 Series Lead-Free 2AG, Fast-Acting



Description

The 2AG Fast-Acting Fuses are available in cartridge form or with axial leads. 2AG Fuses provide the same performance characteristics as their 3AG counterpart, while occupying one-third the space. Sleeved fuses are available.

Features

- In accordance with Underwriter's Laboratories Standard UL 248-14
- Available in cartridge and axial lead form and with various forming dimensions
- RoHS compliant and Lead-free

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	Opening Time
100%	4 hours, Minimum
135%	1 hour, Maximum
200%	1 sec., Maximum

Agency Approvals

Agency	Agency File Number	Ampere Range
	E10480	0.375A - 3.5A
	E10480	4A - 10A
	29862	0.375A - 10A
	NBK200405-E10480A/B/C/D NBK110512-E10480A/B NBK210405-E10480E/F	1A - 3.5A 4A - 5A 6A - 10A
	N/A	0.375A - 10A

Additional Information



**Datasheet
224 Series**



**Resources
224 Series**



**Samples
224 Series**



**Datasheet
225 Series**



**Resources
225 Series**



**Samples
225 Series**



**Accessories
224 & 225 Series**

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

Electrical Characteristic Specifications by Item

Amp Code	Ampere Rating (A)	Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I ² t (A ² sec)	Agency Approvals				
.375	0.375	250	35A@250Vac 10KA@125Vac 10KA@125Vdc	0.3950	0.171	x		x		x
.500	0.5	250		0.2650	0.365	x		x		x
.750	0.75	250		0.1520	1.050	x		x		x
.001	1	250	100A@250Vac 10KA@125Vac 10KA@125Vdc	0.1027	2.220	x		x	x	x
.015	1.5	250		0.0712	0.800	x		x	x	x
.002	2	250		0.0497	2.180	x		x	x	x
.025	2.5	250		0.0372	3.820	x		x	x	x
.003	3	250		0.0317	4.620	x		x	x	x
.035	3.5	250	100A@250Vac 500A@125Vac	0.0265	6.700	x		x	x	x
.004	4	125		0.0240	9.400		x	x	x	x
.005	5	125		0.0186	17.0		x	x	x	x
.005	5	250		0.0186	17.0		x	x		x
.006	6	125		0.0154	22.1		x	x	x	x
.007	7	125	500A@125Vac	0.0130	40.0		x	x	x	x
.008	8	125		0.0107	56.0		x	x	x	x
.010	10	125		0.0075	116.0		x	x	x	x

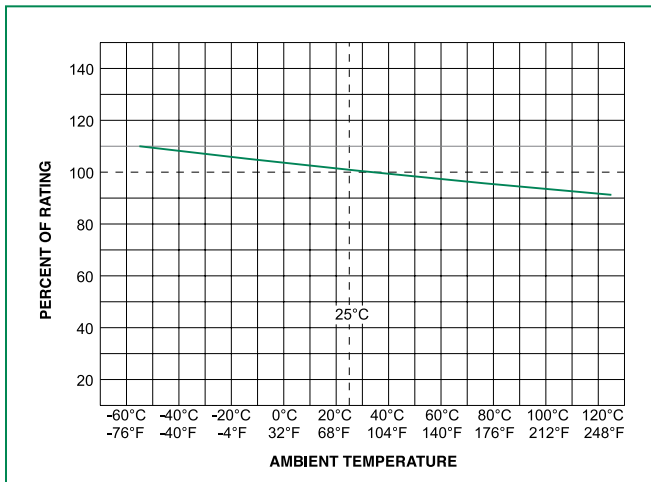
* 10A with 500A @ 125 Vdc internal breaking capacity testing.

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Specifications are subject to change without notice. Application testing is strongly recommended.

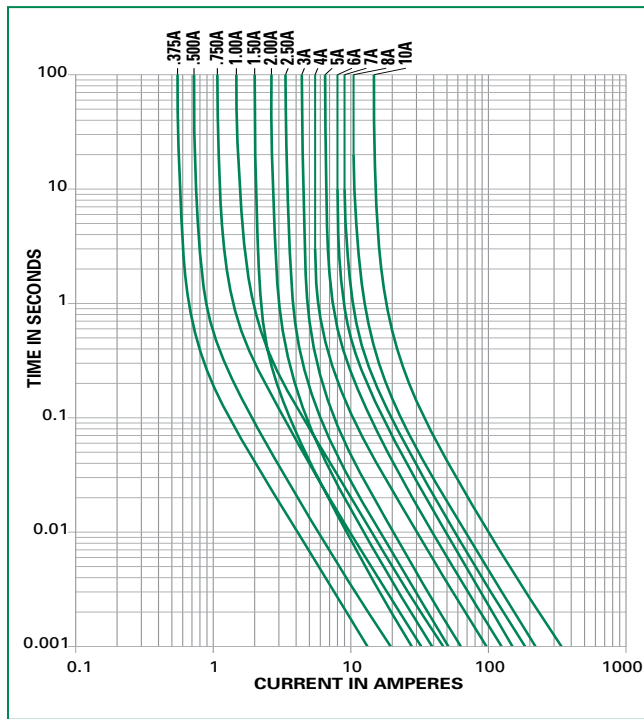
Revised: 02/07/19

Temperature Re-rating Curve

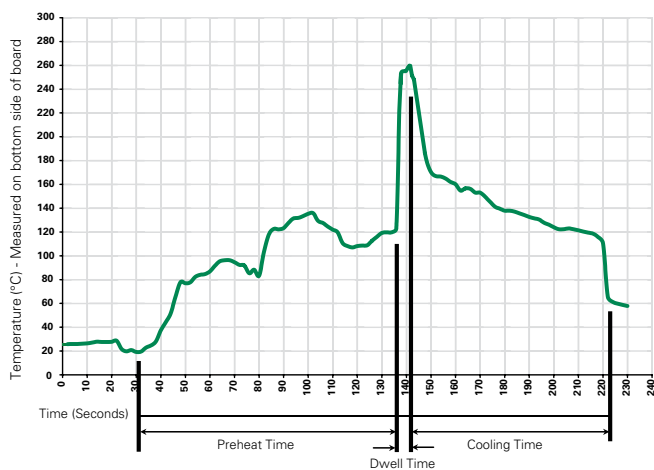


Note:
Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

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.

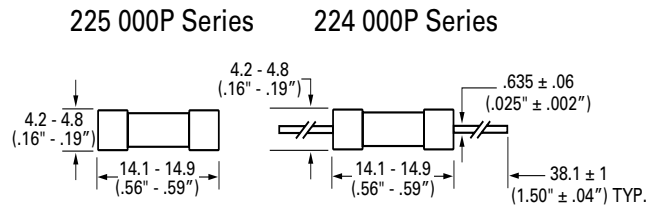
Note: These devices are not recommended for IR or Convection Reflow process.

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	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 temp (40°C) for 240 hours
Salt Spray	MIL-STD-202, Method 101, Test Condition B

Dimensions



Part Numbering System

0224 xxxx M X P

Series
0229 = Cartridge
0230 = Axial Leaded

Amp Code
Refer to Amp Code column of Electrical Characteristics Table

Quantity Code
M = 1000

Packaging Code
X = Filler

Lead-free

Note: The ratings from 4A to 10A with MXUP in the suffix

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
224 Series				
Bulk	N/A	1000	MX	N/A
Bulk	N/A	100	HX	N/A
Reel and Tape	EIA 296-E	1500	DRT1	T1=53mm (2.087")
225 Series				
Bulk	N/A	1000	MX	N/A
Bulk	N/A	100	HX	N/A

Recommended Accessories

Accessory Type	Series	Description	Max Application Voltage	Max Application Amperage
Holder	245	Panel Mount Shock-Safe Fuseholder	300	10
	150	In-Line Fuseholder	350	10
	286	Panel Mount Flip-Top Shock-Safe Fuseholder	250	10
Block	254	OMNI-BLOK® Fuse Block	400	10
Clip	111	PC Board Mount Fuse Clip	250	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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