

### 328 Series, Lead-Free 3AB, High Surge Withstand Fuse



#### Agency Approvals

Agency	Agency File Number	Ampere Range
	T 50260582 01 *	21A
	E10480	21A

\* - Approved to UL 248-1 and UL 248-14

#### Electrical Characteristics for Series

% of Ampere Rating	Opening Time
100%	4 hours, minimum
200%	120 sec., maximum

#### Additional Information



**Datasheet**



**Resources**



**Samples**



**Accessories**

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

#### Description

The 328 Series is a 300VAC rated, 10kA surge withstand, 6.3×32mm ceramic fuse, designed in accordance to UL 248-1 and UL 248-14 Standards, provided in cartridge and axial-lead packages.

#### Features

- High surge withstand capability
  - 20 hits of 10kA 8/20μs surge
  - Meets ANSI/IEEE C62.41.2, Category C-High
  - Meets US Dept of Energy (DOE) MSSLC/ CBEA street lighting and parking lot lighting, elevated level
- Small form factor (6.3×32mm) with cartridge and axial-lead package options
- Breaking capacity: 200A@300VAC, 200A@100VDC
- Lead-free, RoHS compliant and halogen-free
- Recognized to UL/CSA/ NMX 248-1 and UL/CSA/ NMX 248-14
- Operating temperature: -55°C to 125°C

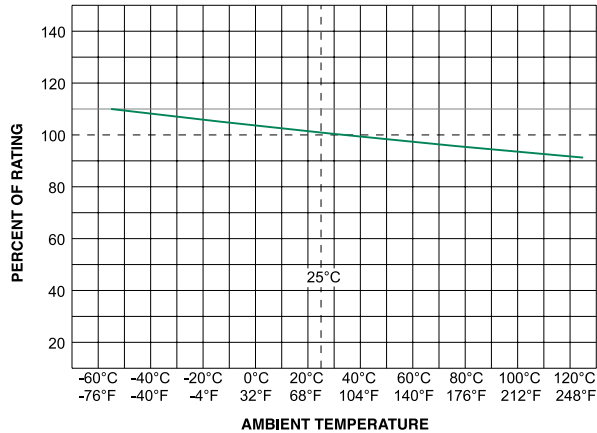
#### Applications

- Commercial and outdoor LED luminaries
- Outdoor electronics and electrical equipment.
- Surge protection for telecom application.

#### Electrical Characteristic by Item

Amp Rating (A)	Voltage Rating (VAC)	Interrupting Rating	Surge Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec)	Agency Approvals	
21A	300	200A@300VAC 200A@100VDC	1.2/50 - 8/20μs, 20kV/10kA 20 hits	0.0042	4,800	X	X

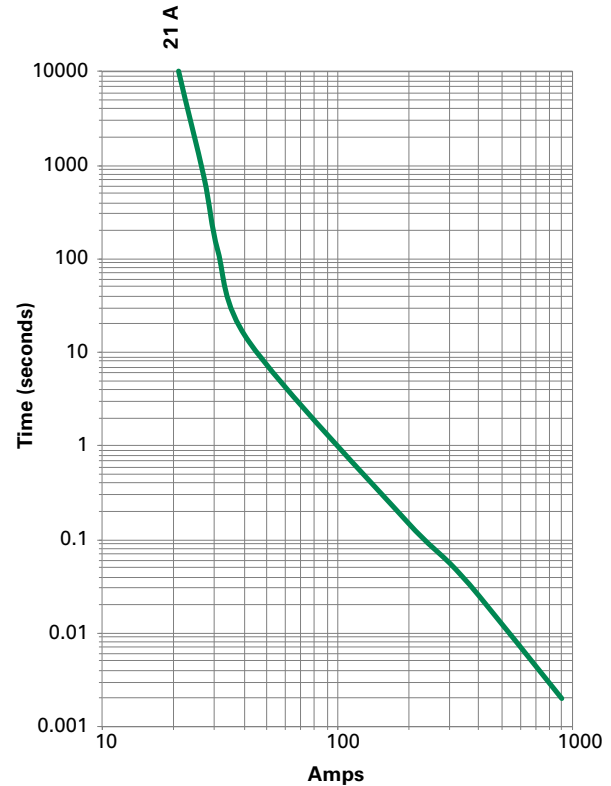
### Temperature Re-rating Curve



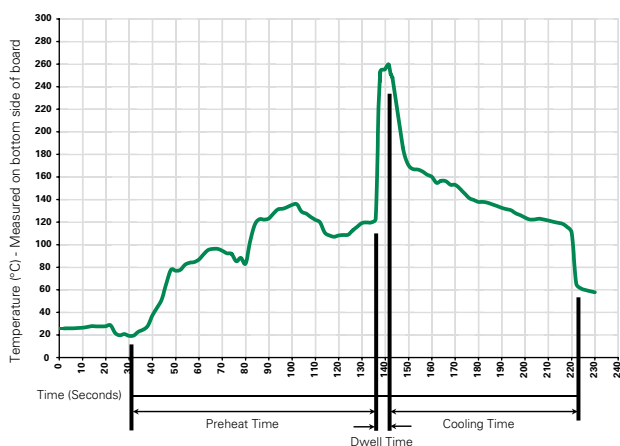
**Note:**

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.

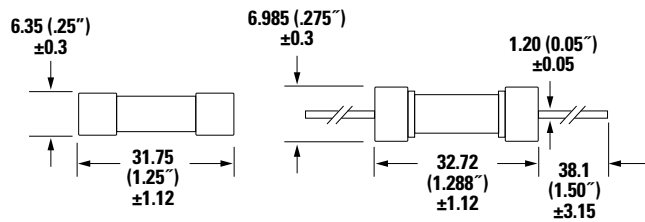
### Product Characteristics

<b>Materials</b>	Body: Ceramic Cap: Nickel-plated brass Leads: Tin-plated copper
<b>Terminal Strength</b>	MIL-STD-202, Method 211, Test Condition A
<b>Solderability</b>	MIL-STD-202 Method 208
<b>Product Marking</b>	Cap1: Brand logo, current and voltage ratings Cap2: Series and agency approval marks

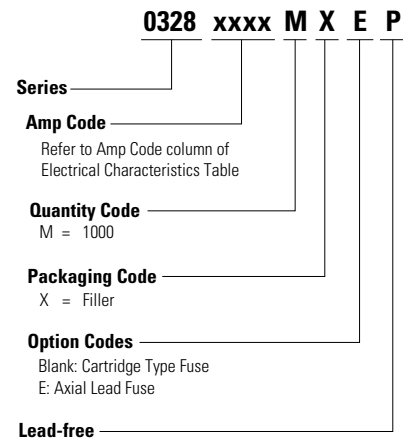
<b>Operating Temperature</b>	-55°C to +125°C
<b>Thermal Shock</b>	MIL-STD-202, Method 107, Test Condition B: (5 cycles -65°C to +125°C)
<b>Vibration</b>	MIL-STD-202, Method 201
<b>Humidity</b>	MIL-STD-202, Method 103, Test Condition A. High RH (95%) and elevated temperature (40°C) for 240 hours.
<b>Salt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

### Dimensions

Measurements displayed in millimeters (inches).



### Part Numbering System



### Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
<b>328 Series</b>				
Bulk	N/A	1000	MX	N/A

### Recommended Accessories

Accessory Type	Series	Description	Max Application Voltage	Max Application Amperage
Block	<a href="#">354</a>	Low Profile OMNI-BLOK® Fuse Block	600	30
	<a href="#">359</a>	High Current Screw Terminal Fuse Block		30
Clip	<a href="#">122</a>	High Current Traditional PC Board Fuse Clip	1000	30

#### 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.