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

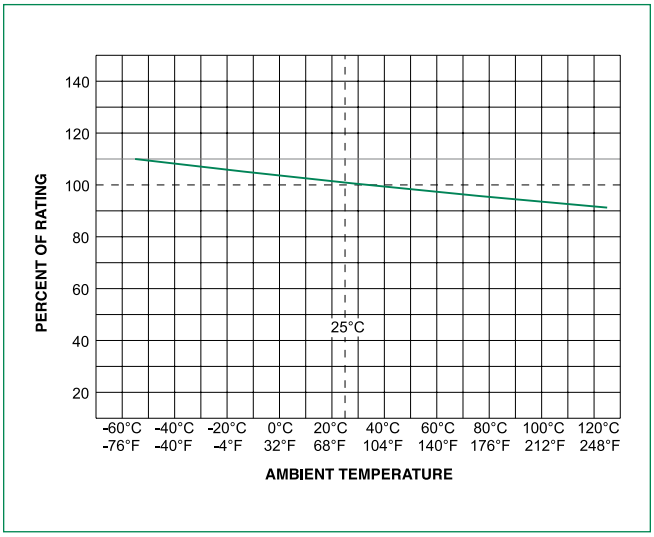
Applications

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

Electrical Characteristic by Item

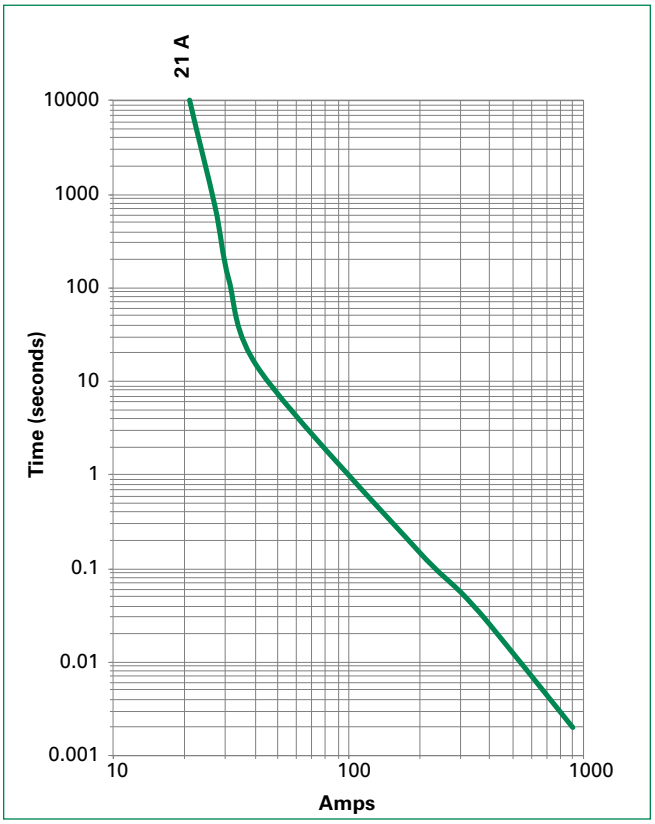
Amp Rating (A)	Voltage Rating (VAC)	Interrupting Rating	Surge Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I²t (A² sec)	Agency Approvals	
~~21~~ 1	300	200A@300VAC 200A@100VDC	1.2/50 - 8/20µs, 20kV/10kA 20 hits	0.0042	4,800	X	X

Temperature Re-rating Curve

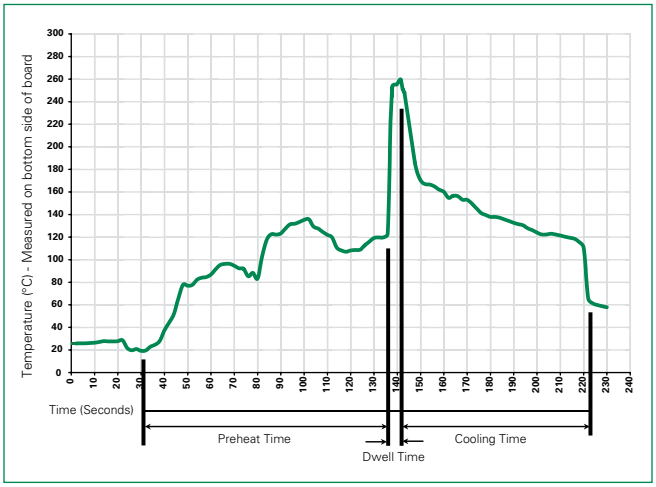


Note:
Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

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.

Revised: BA.08/17/20

Axial Lead & Cartridge Fuses

3AB > High I^2t > 328 Series

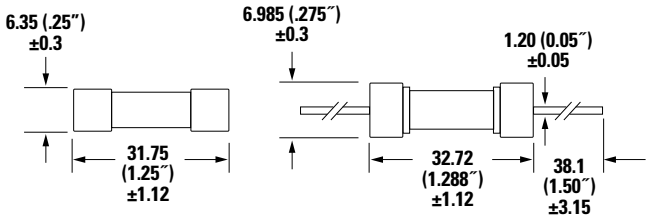
Product Characteristics

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

Measurements displayed in millimeters (inches).



Part Numbering System

0328 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: Cartridge Type Fuse
  E: Axial Lead Fuse
- **Lead-free**

Packaging

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

Recommended Accessories

Accessory Type	Series	Description	Max Application Voltage	Max Application Amperage
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

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.