

# 828 Series

## High Voltage Cartridge Fuses



### Description

The 828 Series fuses are specifically designed and tested to the circuit protection needs of compact auto-electronics applications. This series is rated 1,000Vdc with remarkable interrupting rating.

### Features and Benefits

- Available in Through-hole and Bolt Down version
- RoHS-compliant, lead-free and halogen-free.
- Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14 for the US and Canadian Markets
- Small size
- High voltage
- High breaking capacity
- AEC-Q200 Qualified

### Additional Information



Resources



Accessories



Samples

### Applications

- On-Board Charger
- Power Distribution Unit

### Agency Approvals

| Agency  | Agency File Number | Ampere Range |
|---------|--------------------|--------------|
| c UL US | E10480             | 15 A - 30 A  |

### Electrical Characteristics

| % of Ampere Rating | Ampere Rating | Opening Time at 25°C |
|--------------------|---------------|----------------------|
| 100%               | 15 A - 30 A   | 4hrs, Min.           |
| 135%               | 15 A - 30 A   | 3600 seconds, Max.   |

### Electrical Specifications

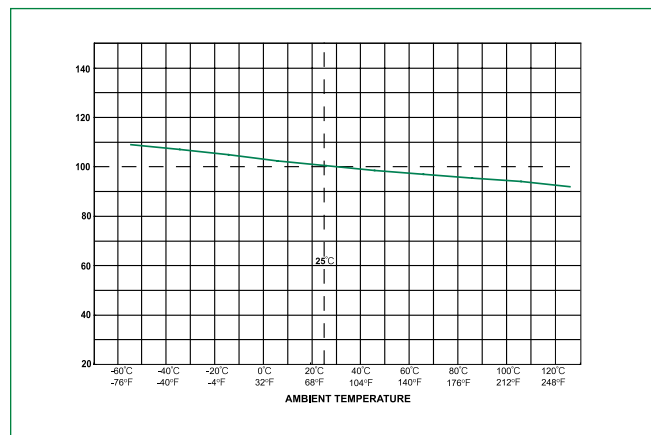
| Ampere Rating (A) | Amp Code | Max Voltage Rating (V) | Interrupting Rating (AC/DC) | Nominal Cold Resistance (mOhm) | Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec) | Agency Approvals |
|-------------------|----------|------------------------|-----------------------------|--------------------------------|-------------------------------------------------------|------------------|
| 15                | 015.     | 1000Vdc                | 10KA@1000Vdc                | 7.65                           | 190                                                   | c UL US          |
| 20                | 020.     |                        |                             | 4.90                           | 536                                                   |                  |
| 25                | 025.     |                        |                             | 3.20                           | 1190                                                  |                  |
| 30                | 030.     |                        |                             | 2.90                           | 1500                                                  |                  |

**Note:** Unless otherwise stated, all specifications are referenced at room ambient temperature.

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### Temperature Re-rating Curve

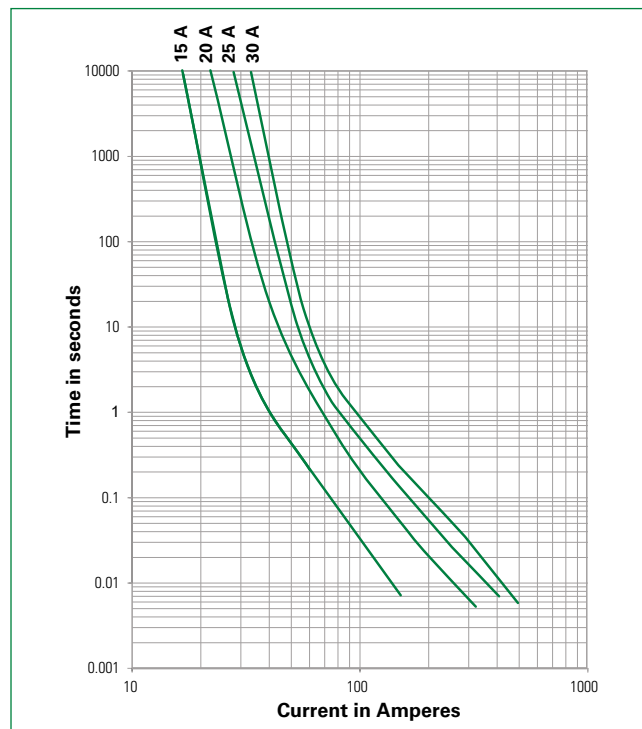


**Note:** Re-rating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

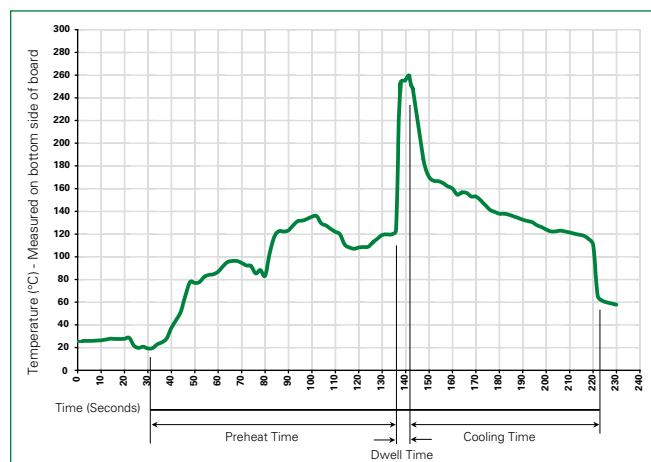
### Product Characteristics

|                                  |                                                                                |
|----------------------------------|--------------------------------------------------------------------------------|
| <b>Materials</b>                 | Body: Glass fiber<br>Cap: Tin plated Copper alloy                              |
| <b>Mechanical Shock</b>          | MIL-STD-202, Method 213, Test Condition I<br>(100 G's peak for 6 milliseconds) |
| <b>Solderability</b>             | Reference MIL-STD-202 method 208                                               |
| <b>Product Marking</b>           | Brand logo, current and voltage ratings                                        |
| <b>Resistance to Solder Heat</b> | MIL-Std 202 Method 210<br>Test Condition B<br>(10sec at 260 °C)                |
| <b>Operating Temperature</b>     | -55 °C to +125 °C                                                              |
| <b>Vibration</b>                 | MIL-STD-202G, Method 201A                                                      |
| <b>Salt Spray</b>                | MIL-STD-202G, Method 101E,<br>Test condition B                                 |

### Average Time Current Curves



## Soldering Parameters–Wave Soldering



| Wave Parameter                                              | Lead-Free Recommendation          |
|-------------------------------------------------------------|-----------------------------------|
| <b>Preheat:</b><br>(Depends on Flex Activation Temperature) | (Typical Industry Recommendation) |
| Temperature Minimum                                         | 100 °C                            |
| Temperature Maximum                                         | 150 °C                            |
| Preheat Time                                                | 60–180 seconds                    |
| <b>Solder Pot Temperature</b>                               | 260 °C Maximum                    |
| <b>Solder Dwell Time</b>                                    | 2–5 seconds                       |

#### Recommended Hand-Solder Parameters:

Solder Iron Temperature: 350 °C +/- 5 °C

Heating Time: 5 seconds max.

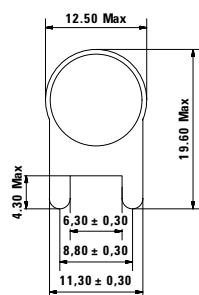
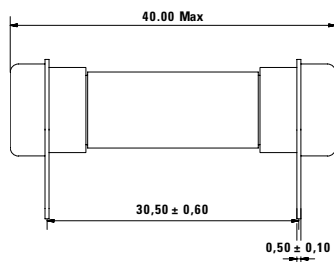
**Note:** These devices are not recommended for IR or Convection Reflow process.

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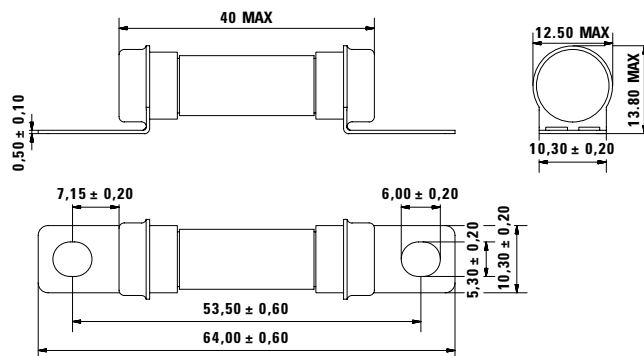
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### Dimensions (mm)

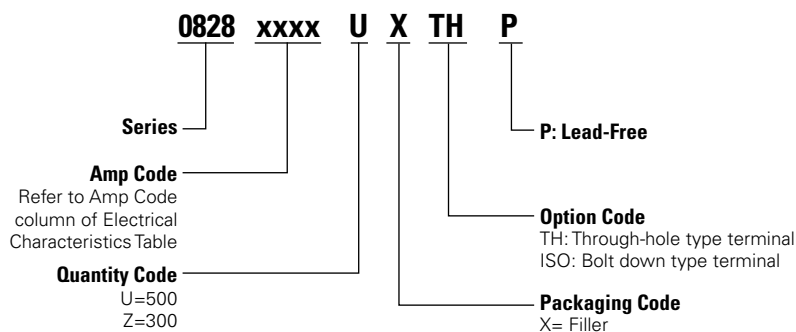
Through-hole



Bolt Down



### Part Numbering System



### Packaging

| Packaging Option               | Packaging Specification | Quantity | Quantity & Packaging Code | Reel Size |
|--------------------------------|-------------------------|----------|---------------------------|-----------|
| <b>828 Though Hole Version</b> |                         |          |                           |           |
| Tray                           | NA                      | 500      | UXTH                      | NA        |
| <b>828 Bolt Down Version</b>   |                         |          |                           |           |
| Tray                           | NA                      | 300      | ZXISO                     | NA        |

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