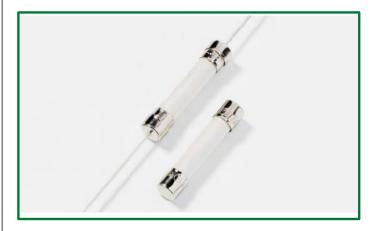


# 525 series, Lead-free 3AB Fuse







| Agency         | Agency File Number | Ampere Range |  |
|----------------|--------------------|--------------|--|
| c <b>91</b> 0s | E10480             | 15A-30A      |  |

# **Description**

The 525 series is AECQ-Compliant, 450VDC rated ceramic fuse with remarkable interrupting rating, which is well suited for circuit protection in high energy applications

### **Features**

- Available in cartridge and axial lead form
- RoHS compliant and Lead-free
- Compact form factor of 6.3x32mm
- High Interrupting Rating
- Meet Littelfuse's automotive qualifications\*

## **Applications**

- On board charger
- UPS

## **Electrical Characteristics**

| % of Ampere Rating | Opening Time |
|--------------------|--------------|
| 100%               | 4hours, Min  |
| 200%               | 30mins, Max  |
| 300%               | 10sec , Max  |

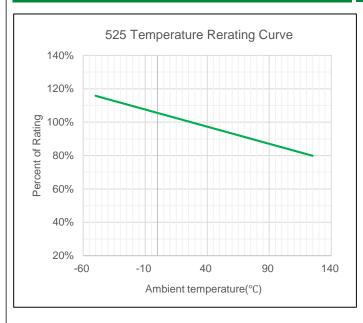
# **Electrical Characteristic Specifications**

| Amp Code | Amp<br>Rating(A) | Max. Voltage<br>Rating(V) | Interrupting Rating | Nominal Cold Resistance<br>(Ohms) | Nominal Melting I <sup>2</sup> t<br>(A <sup>2</sup> sec) | Agency<br>Approvals |
|----------|------------------|---------------------------|---------------------|-----------------------------------|--|---------------------|
| 015.     | 15               | 450VDC                    | 401/4 @ 4501/DQ     | 0.0085                            | 55   | х                   |
| 020.     | 20               |                           |                     | 0.0049                            | 210  | Х                   |
| 025.     | 25               | 450VDC                    | 10KA@450VDC         | 0.0038                            | 320  | Х                   |
| 030.     | 30               |                           |                     | 0.0031                            | 580  | Х                   |

<sup>\*-</sup> Largely based on Littelfuse internal AEC-Q200 test plan



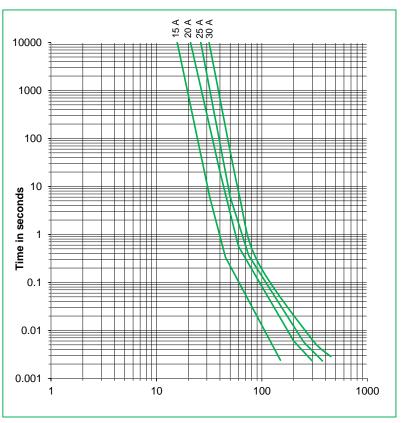
## Temperature Rerating Curve



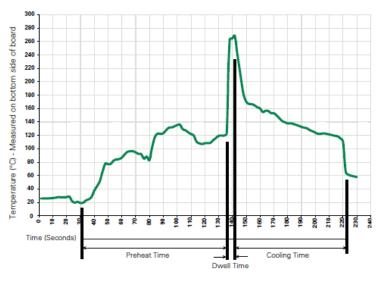
#### Note:

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

## Average Time Current Curve



## 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 DwellTime:                        | 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.



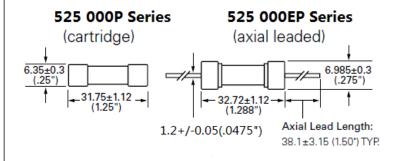
### **Product Characteristics**

| Materials         | Body: Ceramic<br>Cap: Nickel-plated brass<br>Leads: Tin-plated copper       |  |  |
|-------------------|---|--|--|
| Terminal Strength | Mil-STD-202G, Method 211A,<br>Test condition A                              |  |  |
| Solderability     | Reference MIL-STD-202 method 208  |  |  |
| Product Marking   | Cap 1: Brand logo, current and voltage ratings Cap 2: Agency approval marks |  |  |

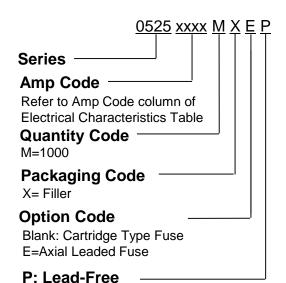
| Operating<br>Temperature | -55°C to +125°C                             |  |  |
|--------------------------|---|--|--|
| Thermal Shock            | MIL-STD-202G, Method 107G, Test condition B |  |  |
| Vibration                | MIL-STD-202G, Method 201A                   |  |  |
| Moisture Resistance      | MIL-STD-202G, Method 103B, Test condition A |  |  |
| Salt Spray               | MIL-STD-202G, Method 101E, Test condition B |  |  |

### **Dimensions**

## Part Numbering System



15A: Φ1.0mm lead wire 20A-30A: Φ1.2mm lead wire



# Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Reel Size |  |
|------------------|-------------------------|----------|---------------------------|-----------|--|
| 525 Series       |                         |          |                           |           |  |
| Bulk             | N/A                     | 1000     | MX                        | N/A       |  |
| Bulk             | N/A                     | 1000     | MXE                       | N/A       |  |

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