

RoHS

### 459 Series PICO® Very Fast-Acting Surface Mount Fuse



#### Description

The 459 Series Very Fast-Acting SMF is based on Littelfuse PICO® fuse technology, though offered in a surface mount package.

This series of devices meets the requirements of the RoHS directive.

#### Features

- Very Fast-Acting
- Wide current rating range: 62mA to 5A
- Wide operating temperature range
- Low temperature rerating
- RoHS compliant

#### Applications

- Wireless basestation
- Network equipment
- Telecom equipment

#### Agency Approvals

| AGENCY                                                                            | AGENCY FILE NUMBER | AMPERE RANGE |
|-----------------------------------------------------------------------------------|--------------------|--------------|
|  | E10480             | 62mA - 5A    |
|  | LR29862            | 62mA - 5A    |

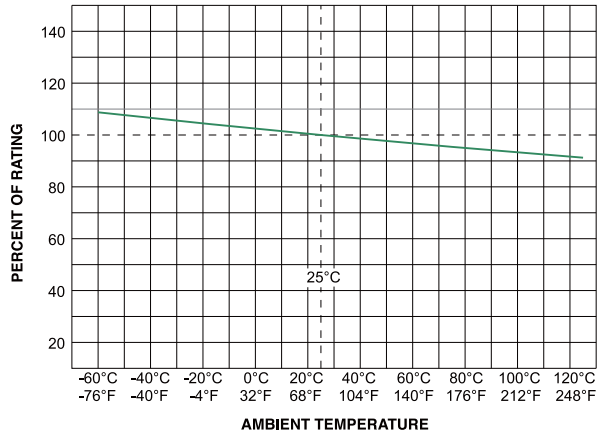
#### Electrical Characteristics for Series

| % of Ampere Rating | Opening Time        |
|--------------------|---------------------|
| 100%               | 4 hours, Minimum    |
| 200%               | 1 second, Maximum   |
| 300%               | 0.1 second, Maximum |

#### Electrical Specifications by Item

| Ampere Rating (A) | Amp Code | Max Voltage Rating (V) | Interrupting Rating             | Nominal Cold Resistance (Ohms) | Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec) | Agency Approvals                                                                      |                                                                                       |
|-------------------|----------|------------------------|---------------------------------|--------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                   |          |                        |                                 |                                |                                                       |  |  |
| 0.062             | .062     | 125                    | 50 A @125 VAC<br>300 A @125 VDC | 7.0000                         | 0.000075                                              | x                                                                                     | x                                                                                     |
| 0.125             | .125     | 125                    |                                 | 1.7000                         | 0.00163                                               | x                                                                                     | x                                                                                     |
| 0.250             | .250     | 125                    |                                 | 0.6650                         | 0.0106                                                | x                                                                                     | x                                                                                     |
| 0.375             | .375     | 125                    |                                 | 0.3950                         | 0.0254                                                | x                                                                                     | x                                                                                     |
| 0.500             | .500     | 125                    |                                 | 0.2800                         | 0.0546                                                | x                                                                                     | x                                                                                     |
| 0.750             | .750     | 125                    |                                 | 0.1750                         | 0.155                                                 | x                                                                                     | x                                                                                     |
| 1.00              | 001.     | 125                    |                                 | 0.1250                         | 0.281                                                 | x                                                                                     | x                                                                                     |
| 1.50              | 01.5     | 125                    |                                 | 0.0800                         | 0.650                                                 | x                                                                                     | x                                                                                     |
| 2.00              | 002.     | 125                    |                                 | 0.0468                         | 0.421                                                 | x                                                                                     | x                                                                                     |
| 2.50              | 02.5     | 125                    |                                 | 0.0350                         | 0.721                                                 | x                                                                                     | x                                                                                     |
| 3.00              | 003.     | 125                    |                                 | 0.0290                         | 1.23                                                  | x                                                                                     | x                                                                                     |
| 3.50              | 03.5     | 125                    |                                 | 0.0240                         | 1.65                                                  | x                                                                                     | x                                                                                     |
| 4.00              | 004.     | 125                    |                                 | 0.0200                         | 2.35                                                  | x                                                                                     | x                                                                                     |
| 5.00              | 005.     | 125                    |                                 | 0.0155                         | 3.90                                                  | x                                                                                     | x                                                                                     |

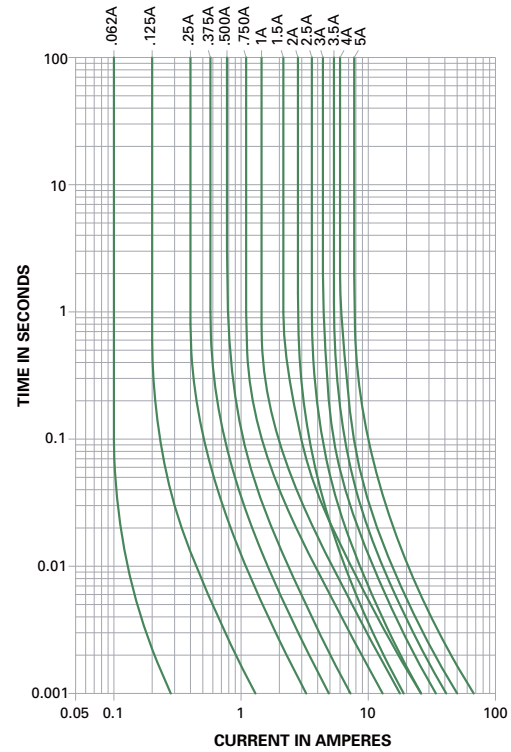
### Temperature Derating Curve



Note:

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

### Average Time Current Curves



### Soldering Parameters

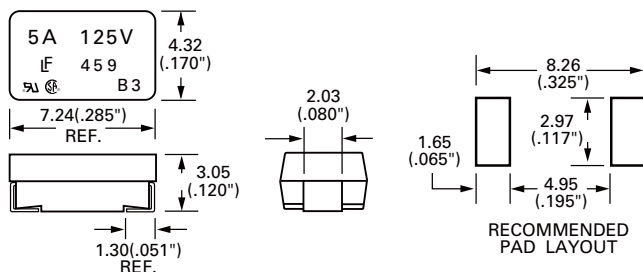
|                  |                        |
|------------------|------------------------|
| Wave Soldering   | 260°C, 10 seconds max. |
| Reflow Soldering | 260°C, 30 seconds max. |

## Product Characteristics

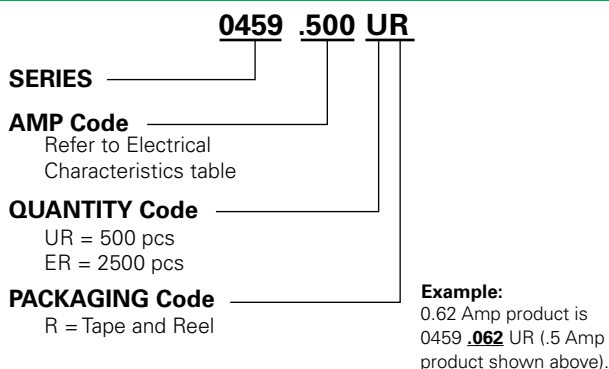
|                                   |                                                                                                       |
|-----------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Materials</b>                  | <b>Body:</b> Molded Thermoplastic<br><b>Terminations:</b> 100% Tin-plated Copper (459 Series)         |
| <b>Solderability</b>              | MIL-STD-202, Method 208                                                                               |
| <b>Product Marking</b>            | <b>Body:</b> Brand Logo, Current Rating, Voltage Rating, Series Code, Date Code, Agency Approved Logo |
| <b>Moisture Sensitivity Level</b> | Level 1 J-STD - 020C                                                                                  |

|                                              |                                                                       |
|----------------------------------------------|-----------------------------------------------------------------------|
| <b>Operating Temperature</b>                 | -55°C to 125°C                                                        |
| <b>Shock</b>                                 | MIL-STD-202, Method 213, Test Condition I (100 G's peak for 6 msecs.) |
| <b>Vibration</b>                             | MIL-STD-202, Method 201 (10-55 Hz, 0.06 inch total excursion)         |
| <b>Salt Spray</b>                            | MIL-STD-202, Method 101, Test Condition B (48 hours)                  |
| <b>Insulation Resistance (After Opening)</b> | MIL-STD-202, Method 302, (10,000 ohms minimum at 100 volts)           |
| <b>Thermal Shock</b>                         | MIL-STD-202, Method 107, Test Condition B (-65 to 125°C)              |
| <b>Moisture Resistance</b>                   | MIL-STD-202, Method 106, High Humidity (90-98 RH), Heat (65°C)        |

## Dimensions



## Part Numbering System



## Packaging

| Packaging Option   | Packaging Specification        | Quantity | Quantity & Packaging Code |
|--------------------|--------------------------------|----------|---------------------------|
| 12mm Tape and Reel | EIA RS-481-1 (IEC 286, part 3) | 500      | UR                        |
| 12mm Tape and Reel | EIA RS-481-1 (IEC 286, part 3) | 2500     | ER                        |