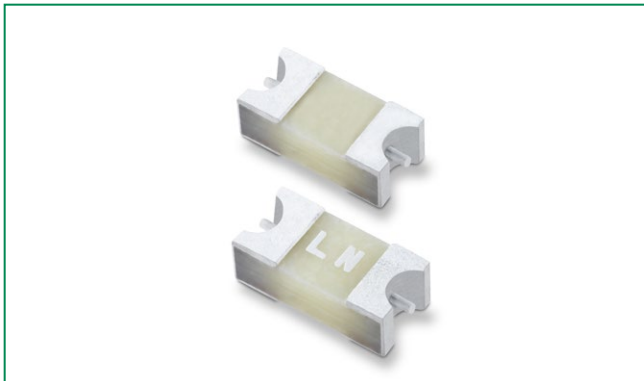



## 470 Series Fuse




### Agency Approvals

| Agency  | Agency File Number | Ampere Range |
|---|--------------------|--------------|
|  | E10480             | 0.500 - 2A   |

### Electrical Characteristics for Series

| % of Ampere Rating | Opening Time       |
|--------------------|--------------------|
| 100%               | 4 Hours, Minimum   |
| 200%               | 5 Seconds, Maximum |

### Electrical Characteristic

| 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  |
|-------------------|----------|------------------------|--|--------------------------------|--|---|
|                   |          |                        |  |                                |  |  |
| 0.500             | .500     | 125V                   | 50A @ 125VDC<br>50A @ 125VAC<br>300A @ 32VDC | 0.5455                         | 0.02874  | x   |
| 1.00              | 001      | 125V                   |  | 0.2242                         | 0.14785  | x   |
| 1.25              | 1.25     | 125V                   |  | 0.1637                         | 0.30269  | x   |
| 1.50              | 01.5     | 125V                   |  | 0.1263                         | 0.45970  | x   |
| 2.00              | 002      | 125V                   |  | 0.1004                         | 0.75625  | x   |

**Note:** I<sup>2</sup>t values stated for 8msec opening time.

### Description

The 470 series is a family of 125V rated high energy SMD fuses, perfect for space constrained applications. It offers the standard Nano Fuse circuit protection capability with a very small 1206 foot print.

This product is RoHS compliant, Halogen-Free and 100% Pb-Free with guaranteed operating temperature of up to 125°C.

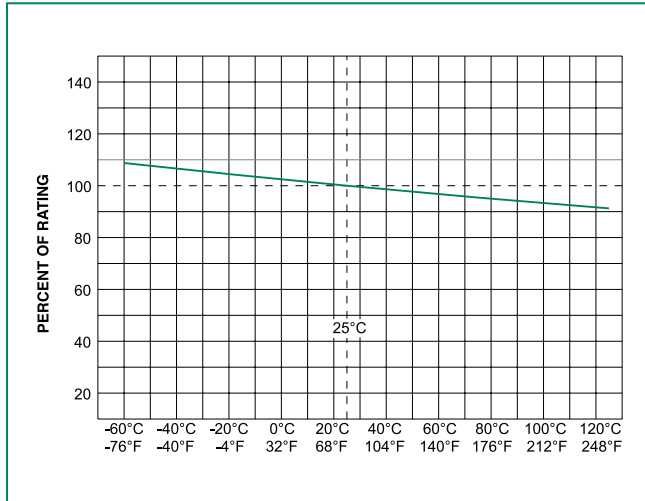
### Features

- Very Small 1206 Footprint
- 125V Voltage Rating
- Fast-Acting
- Pb-Free, RoHS Compliant and Halogen-Free
- Wide Operating temperature range of -55°C to 125°C
- ENERGY STAR® Surge Immunity test compliant (100kHz Ring Wave, 2.5kV, 7 strikes common and differential modes) - 1.5A and above ampere rating only

### Applications

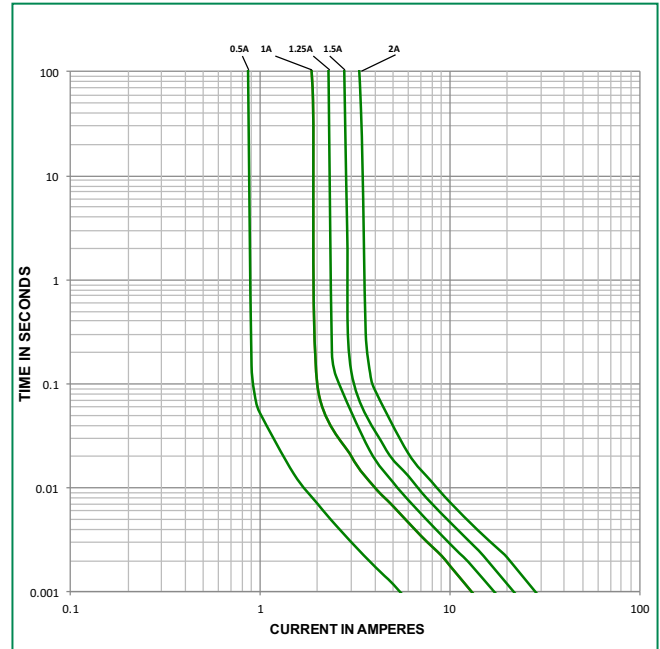
- LED Lighting
- LCD/LED TVs
- Notebooks/PCs
- Gaming Consoles
- Battery Charging Circuit Protection
- Power Supply Units
- Telecom Systems
- White Goods

## Temperature Derating Curve



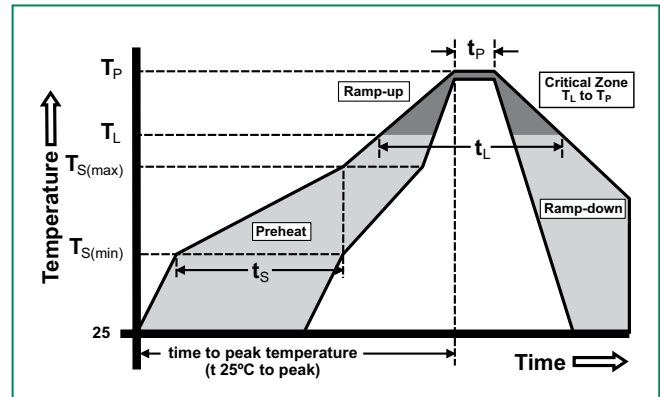
**NOTE:** Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

## Average Time Current Curves



## Soldering Parameters

|  |                                    |                         |
|--|------------------------------------|-------------------------|
| Reflow Condition                                       |                                    | Pb – free assembly      |
| Pre Heat   | - Temperature Min ( $T_{s(min)}$ ) | 150°C                   |
|  | - Temperature Max ( $T_{s(max)}$ ) | 200°C                   |
|  | - Time (Min to Max) ( $t_s$ )      | 60 – 180 seconds        |
| Average Ramp-up Rate (Liquidus Temp ( $T_L$ ) to peak) |                                    | 5°C/second max.         |
| $T_{s(max)}$ to $T_L$ - Ramp-up Rate                   |                                    | 5°C/second max.         |
| Reflow   | - Temperature ( $T_L$ ) (Liquidus) | 217°C                   |
|  | - Temperature ( $t_L$ )            | 60 – 90 seconds         |
| Peak Temperature ( $T_p$ )                             |                                    | 250 <sup>+0/-5</sup> °C |
| Time within 5°C of actual peak Temperature ( $t_p$ )   |                                    | 20 – 40 seconds         |
| Ramp-down Rate   |                                    | 5°C/second max.         |
| Time 25°C to peak Temperature ( $T_p$ )                |                                    | 8 minutes max.          |
| Do not exceed  |                                    | 260°C                   |

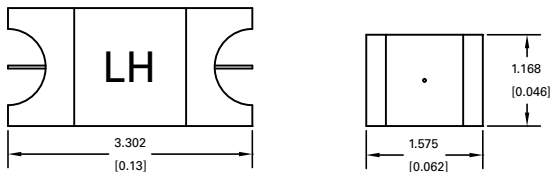


## Product Characteristics

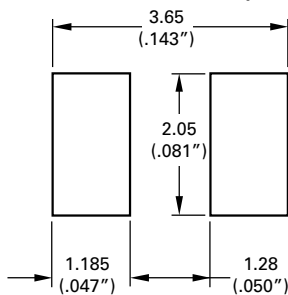
|  |  |
|--|--|
| <b>Materials</b>                             | <b>Body:</b> Epoxy Resin<br><b>Terminations:</b> Cu/Ni/Sn (100% Pb-free) |
| <b>Product Marking</b>                       | <b>Body:</b> Current Rating  |
| <b>Operating Temperature</b>                 | -55°C to +125°C  |
| <b>Solderability</b>                         | MIL-STD-202  |
| <b>Insulation Resistance (after opening)</b> | IEC 60127-4 (0.1Mohm Min)  |

|                                     |   |
|-------------------------------------|---|
| <b>Thermal Shock</b>                | MIL-STD-202, Method 107, Test Condition B, 5 cycles, -65°C to 125°C, 15 minutes @ each extreme  |
| <b>Mechanical Shock</b>             | MIL-STD-202, Method 213B, Test Condition I: De-energized. 100G's peak amplitude, sawtooth wave 6ms duration, 3 cycles XYZ+xyz = 18 shocks |
| <b>Vibration</b>                    | MIL-STD-202, Method 201: 0.03" amplitude, 10-55 Hz in 1 min. 2 hrs. each XYZ = 6hrs (10- 55 Hz)   |
| <b>Moisture Resistance</b>          | MIL-STD-202, Method 106, 10 cycles Condition A  |
| <b>Salt Spray</b>                   | MIL-STD-202, Method 101, Test Condition B (48 hrs)  |
| <b>Resistance to Soldering Heat</b> | Method 210, Test Condition B (10 sec at 260°C)  |

## Dimensions



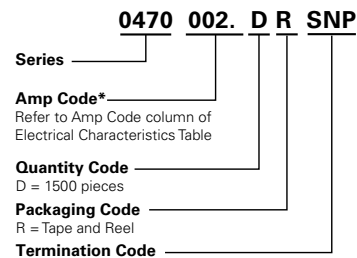
### Recommended Pad Layout



## Part Marking System

| Amp Code | Marking Code |
|----------|--------------|
| .500     | <b>LF</b>    |
| 001.     | <b>LH</b>    |
| 1.25     | <b>LJ</b>    |
| 01.5     | <b>LK</b>    |
| 002.     | <b>LN</b>    |

## Part Numbering System



## Packaging

| Packaging Option  | Packaging Specification | Quantity | Quantity & Packaging Code | Reel Size |
|-------------------|-------------------------|----------|---------------------------|-----------|
| 8mm Tape and Reel | EIA-RS-481-1            | 1500     | DR                        | N/A       |

**Disclaimer Notice** - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at [www.littelfuse.com/disclaimer-electronics](http://www.littelfuse.com/disclaimer-electronics).

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9