

### 505 Series, Lead-free 3AB, Fast-Acting Fuse



#### Agency Approvals

| Agency                                                                            | Agency File Number | Ampere Range |
|-----------------------------------------------------------------------------------|--------------------|--------------|
|  | E10480             | 10A - 30A    |
|  | 1312914            | 10A - 12A    |
|  | N/A                | 10A - 30A    |
|  | T5026910801        | 15 - 30A     |

#### Description

A 500VAC/VDC rated ceramic fuse with remarkable interrupting rating in a compact 6.3 x 32mm package, which is well suited for circuit protection in high energy applications.

#### Features

- In accordance with underwriter's Laboratories Standard UL 248-14
- Available in cartridge and axial lead form and with various lead forming dimensions.
- RoHS compliant and Lead-free
- Superior Interrupting rating of 20,000 Amperes
- Compact form factor of 6.3mm x 32mm

#### Applications

- Uninterruptible Power Supplies (UPS)
- 3-Phase Power Supplies

#### Electrical Characteristic Specifications by Item

| Amp Code | Ampere Rating (A) | Voltage Rating (V) | Interrupting Rating         | Nominal Cold Resistance (Ohms) | Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec) | Agency Approvals                                                                      |                                                                                       |                                                                                       |                                                                                       |
|----------|-------------------|--------------------|-----------------------------|--------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|          |                   |                    |                             |                                |                                                       |  |  |  |  |
| 010.     | 10                | 450                | 20kA@450VAC<br>1000A@250VDC | 0.0167                         | 91                                                    | x                                                                                     | x                                                                                     | x                                                                                     |                                                                                       |
| 010.*    | 10                | 500                | 200A@500VAC<br>200A@500VDC  | 0.0167                         | 91                                                    | x                                                                                     |                                                                                       | x                                                                                     |                                                                                       |
| 012.     | 12                | 450                | 20kA@450VAC<br>1000A@250VDC | 0.0117                         | 192                                                   | x                                                                                     | x                                                                                     | x                                                                                     |                                                                                       |
| 015.     | 15                | 500                | 50kA@500VAC                 | 0.0073                         | 68                                                    | x                                                                                     |                                                                                       | x                                                                                     | x                                                                                     |
| 016.     | 16                | 500                | 20kA@500VDC                 | 0.0073                         | 68                                                    | x                                                                                     |                                                                                       | x                                                                                     | x                                                                                     |
| 020.     | 20                | 500                | 30kA@500VAC<br>20kA@500VDC  | 0.0056                         | 140                                                   | x                                                                                     |                                                                                       | x                                                                                     | x                                                                                     |
| 025.     | 25                | 500                |                             | 0.0048                         | 210                                                   | x                                                                                     |                                                                                       | x                                                                                     | x                                                                                     |
| 030.     | 30                | 500                |                             | 0.0038                         | 280                                                   | x                                                                                     |                                                                                       | x                                                                                     | x                                                                                     |

#### Notes:

1. 20kA@500VAC&20kA@500VDC interrupting rating available for TUV certification of 15-30A
2. \*200A@500Vac&200A@500Vdc interrupting rating available for 10A. Add suffix "500". Example: 0505010.MX500P, and 0505010.MXE500P"

#### Electrical Characteristics for Series

| % of Ampere Rating | Ampere Rating | Opening Time        |
|--------------------|---------------|---------------------|
| 150%               | 10 - 30       | 30 minutes, Maximum |
| 200%               |               | 30 minutes, Maximum |
| 300%               |               | 10 sec., Maximum    |

#### Additional Information



Datasheet

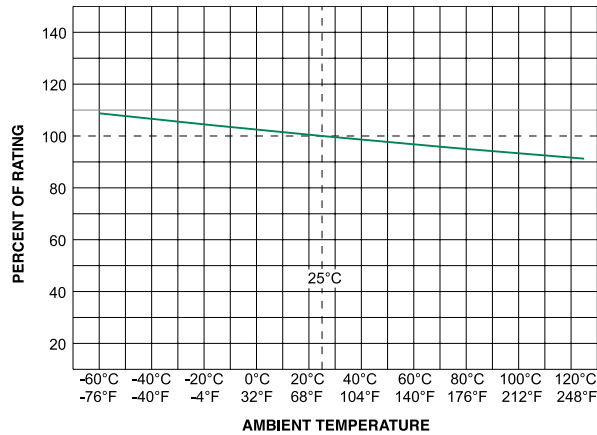


Resources



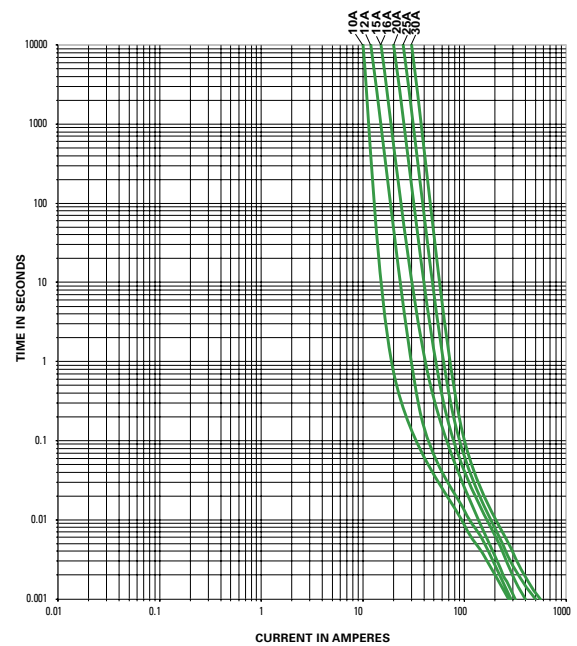
Samples

## Temperature Re-rating Curve

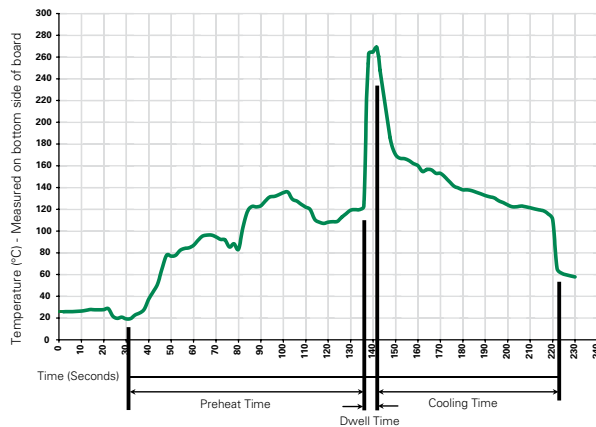


Note:  
Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

## Average Time Current Curves



## Soldering Parameters - Wave Soldering



### Recommended Process Parameters:

| Wave Parameter                           | Lead-Free Recommendation          |
|------------------------------------------|-----------------------------------|
| <b>Preheat:</b>                          |                                   |
| (Depends on Flux Activation Temperature) | (Typical Industry Recommendation) |
| Temperature Minimum:                     | 100° C                            |
| Temperature Maximum:                     | 150°C                             |
| Preheat Time:                            | 60-180 seconds                    |
| <b>Solder Pot Temperature:</b>           | 270°C                             |
| <b>Solder Dwell Time:</b>                | 10 seconds Maximum                |

### 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.**

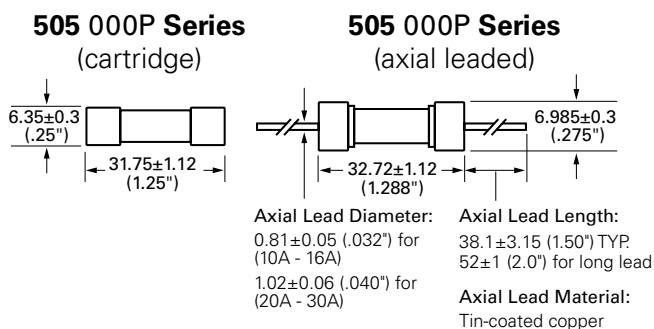
### Product Characteristics

|                          |                                                                                           |
|--------------------------|-------------------------------------------------------------------------------------------|
| <b>Materials</b>         | Body : Ceramic<br>Cap : Nickel-plated brass<br>Leads : Tin-plated Copper                  |
| <b>Terminal Strength</b> | MIL-STD-202, Method 211, Test Condition A                                                 |
| <b>Solderability</b>     | MIL-STD-202 Method 208                                                                    |
| <b>Product Marking</b>   | Cap1 : Brand logo, current and voltage ratings<br>Cap2 : Series and agency approval marks |

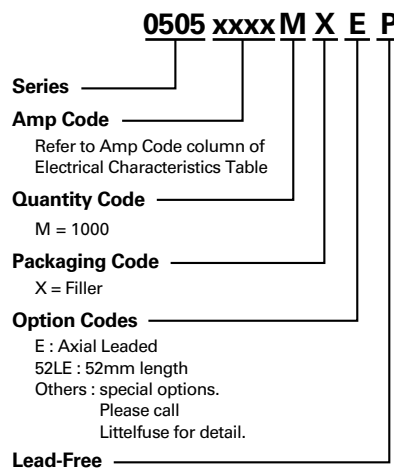
|                               |                                                                                                                |
|-------------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Operating Temperature:</b> | -55°C to 125°C.                                                                                                |
| <b>Thermal Shock:</b>         | MIL-STD-202, Method 107, Test Condition B (5 Cycles -65°C to +125°C).                                          |
| <b>Vibration</b>              | MIL-STD-202, Method 201                                                                                        |
| <b>Humidity</b>               | MIL-STD-202, Method 103, Test Condition A: High relative humidity (95%) and elevated temp (40°C) for 240 hours |
| <b>Salt Spray</b>             | MIL-STD-202, Method 101, Test Condition B                                                                      |

### Dimensions

Measurements displayed in millimeters (inches)



### Part Numbering System



### Packaging

| Packaging Option  | Packaging Specification | Quantity | Quantity & Packaging Code | Reel Size |
|-------------------|-------------------------|----------|---------------------------|-----------|
| <b>505 Series</b> |                         |          |                           |           |
| Bulk              | N/A                     | 1000     | MX                        | N/A       |
| Bulk              | N/A                     | 1000     | MXE                       | N/A       |
| Bulk              | N/A                     | 1000     | MX52LE                    | N/A       |

## 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