

## 325/326 Series Lead-Free 3AB, Slo-Blo® Fuse



## Agency Approvals

| Agency                                                                              | Agency File Number                                                                                                                                                                                    | Ampere Range                                                                             |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|    | E10480                                                                                                                                                                                                | 0.250A - 10A                                                                             |
|    | E10480                                                                                                                                                                                                | 12A - 30A                                                                                |
|    | 29862                                                                                                                                                                                                 | 0.250A - 30A                                                                             |
|  | Cartridge:<br>NBK 030805-E10480A<br>NBK 030805-E10480C<br>NBK 030805-E10480E<br>NBK 260106-JP1021A<br>Leaded:<br>NBK 030805-E10480B<br>NBK 030805-E10480D<br>NBK 030805-E10480F<br>NBK 260106-JP1021B | 1A-3.2A<br>4A-5A<br>6.25A-15A<br>20A-30A<br><br>1A-3.2A<br>4A-5A<br>6.25A-15A<br>20A-30A |
|  | SU05001-5010<br>SU05001-5011<br>SU05001-5012<br>SU05001-6006<br>SU05001-6007                                                                                                                          | 7-10A<br>12A, 15A<br>20A<br>2.8A-3.2A<br>2.5A                                            |
|  | T 50239752 01                                                                                                                                                                                         | *12A/*15A/*20A                                                                           |
|  | N/A                                                                                                                                                                                                   | 0.010A - 30A                                                                             |

\* Approved for cartridge version only

## Description

The 3AB Slo-Blo® Fuse with ceramic body construction permits higher interrupting ratings and voltage ratings. Ideal for applications where high current loads are expected.

## Features

- In accordance with UL Standard 248-14
- Available in cartridge and axial lead format and with various forming dimensions
- RoHS compliant and Lead-free

## Applications

Used as supplementary protection in appliance or utilization equipment to provide individual protection for components or internal circuits.

## Electrical Characteristics for Series

| % of Ampere Rating | Ampere Rating | Opening Time                |
|--------------------|---------------|-----------------------------|
| 100%               | 0.010A – 30A  | 4 hours, Minimum            |
| 135%               | 0.010A – 30A  | 1 hour, Maximum             |
| 200%               | 0.010A – 3.2A | 5 sec., Min., 30 sec., Max. |
|                    | 4A – 30A      | 5 sec., Min., 60 sec., Max. |

### Additional Information



## Datasheet 325 Series



## Resources

### 325 Series



## Samples 325 Series



## Accessories 325 Series



## Datasheet 326 Series



## Resources



## Samples 326 Series



## Accessories

### 326 Series

For recommended fuse accessories for this product series, see 'Recommended Accessories' section.

### 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     | 0.01              | 250                | 100A@250Vac                               | 3324.8000                      | 0.00013                                               |                                                                                    |                                                                                     |                                                                                     |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| .031     | 0.031             | 250                |                                           | 332.5000                       | 0.0110                                                |                                                                                    |                                                                                     |                                                                                     |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| .062     | 0.062             | 250                |                                           | 91.7000                        | 0.0276                                                |                                                                                    |                                                                                     |                                                                                     |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| .100     | 0.1               | 250                |                                           | 33.5500                        | 0.0870                                                |                                                                                    |                                                                                     |                                                                                     |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| .125     | 0.125             | 250                |                                           | 22.4500                        | 0.100                                                 |                                                                                    |                                                                                     |                                                                                     |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| .150     | 0.15              | 250                |                                           | 15.4500                        | 0.143                                                 |                                                                                    |                                                                                     |                                                                                     |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| .175     | 0.175             | 250                |                                           | 8.9200                         | 0.350                                                 |                                                                                    |                                                                                     |                                                                                     |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| .187     | 0.187             | 250                |                                           | 7.7250                         | 0.330                                                 |                                                                                    |                                                                                     |                                                                                     |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| .200     | 0.2               | 250                |                                           | 6.7700                         | 0.316                                                 |                                                                                    |                                                                                     |                                                                                     |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| .250     | 0.25              | 250                | 100A@250Vac<br>10KA@125Vac<br>10KA@125Vdc | 4.4300                         | 0.804                                                 |                                                                                    |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| .300     | 0.3               | 250                |                                           | 3.2200                         | 1.230                                                 |                                                                                    |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| .375     | 0.375             | 250                |                                           | 2.1550                         | 1.20                                                  |                                                                                    |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| .400     | 0.4               | 250                |                                           | 1.9350                         | 1.33                                                  |                                                                                    |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| .500     | 0.5               | 250                |                                           | 1.3000                         | 4.80                                                  |                                                                                    |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| .600     | 0.6               | 250                |                                           | 0.9495                         | 3.90                                                  |                                                                                    |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| .700     | 0.7               | 250                |                                           | 0.7215                         | 6.42                                                  |                                                                                    |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| .750     | 0.75              | 250                |                                           | 0.6410                         | 13.00                                                 |                                                                                    |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| .800     | 0.8               | 250                |                                           | 0.5725                         | 8.20                                                  |                                                                                    |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| 001.     | 1                 | 250                |                                           | 0.3890                         | 16.3                                                  | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| 01.2     | 1.2               | 250                |                                           | 0.2860                         | 22.0                                                  | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| 1.25     | 1.25              | 250                |                                           | 0.2680                         | 40.0                                                  | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| 01.5     | 1.5               | 250                |                                           | 0.1975                         | 59.7                                                  | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| 01.6     | 1.6               | 250                |                                           | 0.1760                         | 66.0                                                  | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| 002.     | 2                 | 250                |                                           | 0.1210                         | 118.0                                                 | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| 02.5     | 2.5               | 250                |                                           | 0.0835                         | 185.0                                                 | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |
| 02.8     | 2.8               | 250                |                                           | 0.0695                         | 232.0                                                 | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |
| 003.     | 3                 | 250                |                                           | 0.0605                         | 200.0                                                 | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |
| 03.2     | 3.2               | 250                | 100A@250Vac<br>10KA@125Vac                | 0.0539                         | 214.0                                                 | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |
| 004.     | 4                 | 250                | 400A@250Vac<br>10KA@125Vac<br>10KA@125Vdc | 0.0761                         | 9.71                                                  | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| 005.     | 5                 | 250                |                                           | 0.0522                         | 25.0                                                  | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| 6.25     | 6.25              | 250                |                                           | 0.0346                         | 60.4                                                  | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     |                                                                                     |
| 007.     | 7                 | 250                |                                           | 0.0227                         | 47.3                                                  | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |
| 008.     | 8                 | 250                |                                           | 0.0193                         | 67.1                                                  | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |
| 010.     | 10                | 250                |                                           | 0.0132                         | 137                                                   | x                                                                                  |                                                                                     | x                                                                                   | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |
| 012.     | 12                | 250                | 400A@250Vac<br>10KA@125Vac<br>600A@125Vdc | 0.0067                         | 129                                                   | x                                                                                  | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   | x***                                                                                | x                                                                                   |
| 012.*    | 12                | 250                | 1500A@250Vac                              | 0.0011                         | 618                                                   |                                                                                    | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| 015.     | 15                | 250                | 400A@250Vac<br>10KA@125Vac<br>600A@125Vdc | 0.0050                         | 245                                                   | x                                                                                  | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   | x***                                                                                | x                                                                                   |
| 015.*    | 15                | 250                | 1500A@250Vac                              | 0.0083                         | 760                                                   |                                                                                    | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| 020.     | 20                | 250                | 400A@250Vac<br>10KA@125Vac<br>600A@125Vdc | 0.0034                         | 575                                                   | x                                                                                  | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   | x***                                                                                | x                                                                                   |
| 020.*    | 20                | 250                | 1500A@250Vac                              | 0.0042                         | 2500                                                  |                                                                                    | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| 025.**   | 25                | 250                | 1500A@250Vac                              | 0.0032                         | 4682                                                  |                                                                                    | x                                                                                   |                                                                                     |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| 025.     | 25                | 250                | 400A@250Vac<br>10KA@60Vdc                 | 0.0024                         | 1030                                                  | x                                                                                  | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |
| 030.     | 30                | 250                | 600A@125Vdc                               | 0.0019                         | 1690                                                  | x                                                                                  | x                                                                                   | x                                                                                   |                                                                                     | x                                                                                   |                                                                                     |                                                                                     |

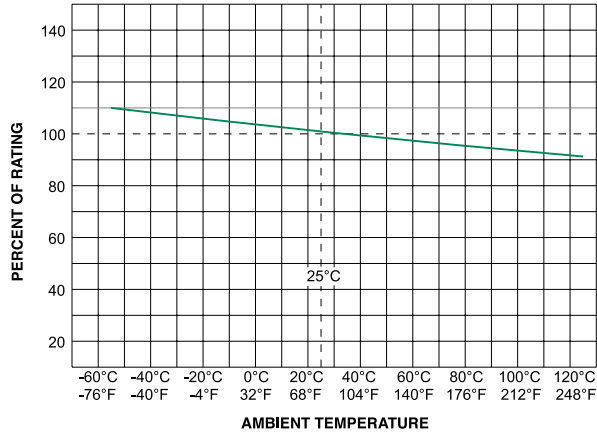
\*Higher I<sup>2</sup>t version available. Please add suffix "D" to part numbers. For instance, 0325020.MXDP, 0326020.MXDP

I<sup>2</sup>t test at 10x rated current.

\*\*Higher I<sup>2</sup>t version available. Please add suffix "W" to part numbers. For instance, 0325025.MXWP

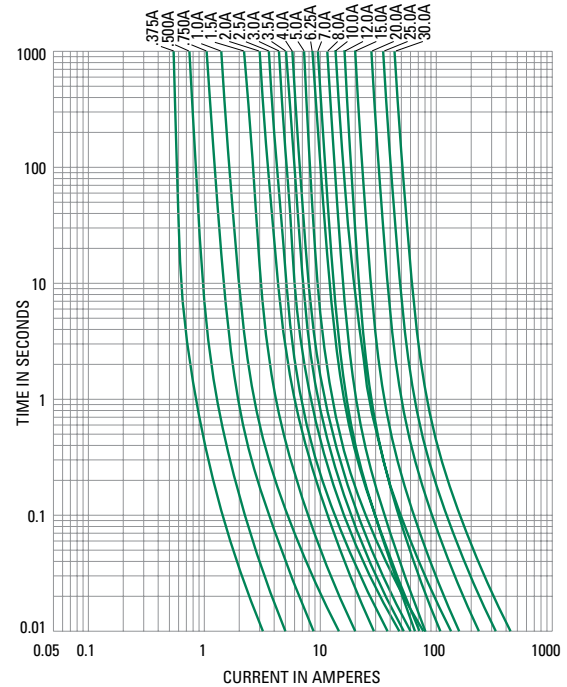
\*\*\*Approved for cartridge versions only, and interrupting rating is 400A@125Vac and 400A@250Vac

### Temperature Re-rating Curve

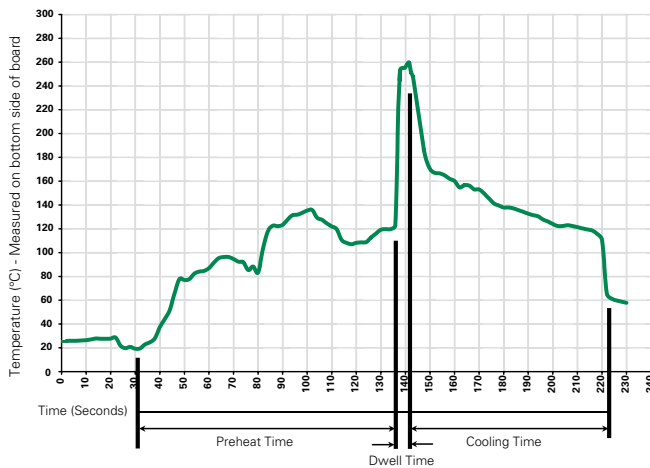


Note:  
Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

### Average Time Current Curves



### Soldering Parameters - Wave Soldering



### Recommended Process Parameters:

| Wave Parameter                                       | Lead-Free Recommendation          |
|------------------------------------------------------|-----------------------------------|
| Preheat:<br>(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 Dwell Time:                                   | 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.

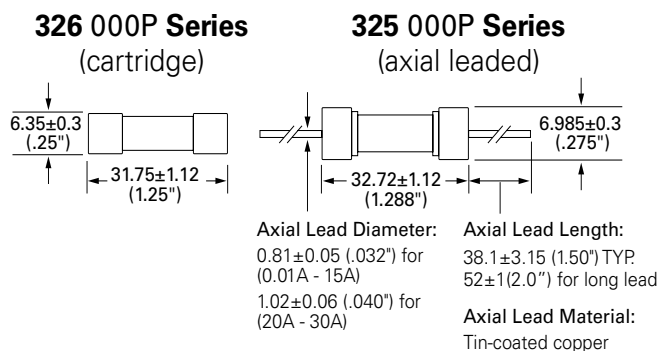
### Product Characteristics

|                          |                                                                                         |
|--------------------------|-----------------------------------------------------------------------------------------|
| <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 |

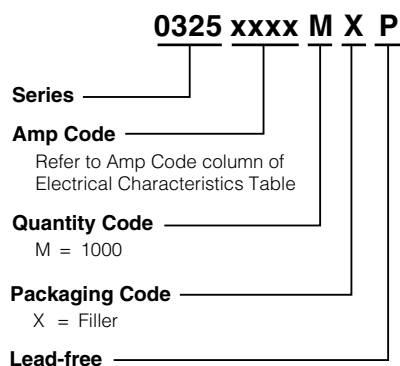
|                              |                                                                                                        |
|------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Operating Temperature</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 RH (95%) and Elevated temperature (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 | Taping Width |
|-------------------|-------------------------|----------|---------------------------|--------------|
| <b>325 Series</b> |                         |          |                           |              |
| Bulk              | N/A                     | 5        | VX                        | N/A          |
| Bulk              | N/A                     | 100      | HX                        | N/A          |
| Bulk              | N/A                     | 1000     | MX                        | N/A          |
| Bulk              | N/A                     | 1000     | MX52 (long lead)          | N/A          |
| Bulk              | N/A                     | 1000     | MX52L (long lead)         | N/A          |
| Bulk              | N/A                     | 1000     | MXD                       | N/A          |
| Bulk              | N/A                     | 1000     | MXF31                     | N/A          |
| Bulk              | N/A                     | 1000     | MXW                       | N/A          |
| <b>326 Series</b> |                         |          |                           |              |
| Bulk              | N/A                     | 5        | VX                        | N/A          |
| Bulk              | N/A                     | 100      | HX                        | N/A          |
| Bulk              | N/A                     | 1000     | MX                        | N/A          |
| Bulk              | N/A                     | 1000     | MXCC                      | N/A          |
| Bulk              | N/A                     | 1000     | MXD                       | N/A          |

### Recommended Accessories

| Accessory Type | Series                 | Description                                                               | Max Application Voltage | Max Application Amperage |
|----------------|------------------------|---------------------------------------------------------------------------|-------------------------|--------------------------|
| Holder         | <a href="#">155100</a> | Twist-Lock In-Line Fuseholder                                             | 32                      | 20                       |
|                | <a href="#">342</a>    | Traditional Panel Mount Fuseholder                                        | 250                     | 20                       |
|                | <a href="#">346</a>    | Panel Mount Flip-Top Shock-Safe Fuseholder                                | 250                     | 15                       |
|                | <a href="#">345</a>    | Shock-Safe Fuseholder with PC Mount, Solder Mount and Panel Mount options | 250                     | 20                       |
| Block          | <a href="#">354</a>    | Low Profile OMNI-BLOK® Fuse Block                                         | 600                     | 30                       |
|                | <a href="#">359</a>    | High Current Screw Terminal Fuse Block                                    |                         | 30                       |
| Clip           | <a href="#">122</a>    | High Current Traditional PC Board Fuse Clip                               | 1000                    | 30                       |
|                | <a href="#">101</a>    | Rivet/Eyelet Type Fuse Clip                                               | 1000                    | 15                       |

**Notes:**

1. Do not use in applications above rating.
2. Please refer to fuseholder data sheet for specific re-rating information.
3. Please contact Littelfuse for applications greater than the max voltage and amperage shown.

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