

# 219XA Series

## 5×20mm, Time-Lag Fuse



### Description

5×20mm time-Lag glass body cartridge fuse designed to IEC specification.

### Features

- Designed to International IEC Standards for use globally
- Available in cartridge and axial lead form
- Meets the IEC 60127-2, Sheet 6 specification for time-Lag fuses
- RoHS compliant and lead-free

### Applications

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

### Additional Information



Resources



Accessories



Samples

### Electrical Characteristics for Series

| % of Ampere Rating | Ampere Rating | Opening Time                |
|--------------------|---------------|-----------------------------|
| 150%               | 0.04A - 0.1A  | 1 hours, Minimum            |
|                    | 0.125A - 6.3A | 1 hours, Minimum            |
| 210%               | 0.04A - 0.1A  | 2 minutes, Maximum          |
|                    | 0.125A - 6.3A | 2 minutes, Maximum          |
| 275%               | 0.04A - 0.1A  | 0.2 sec., Min; 10 sec. Max  |
|                    | 0.125A - 6.3A | 0.6 sec., Min; 10 sec. Max  |
| 400%               | 0.04A - 0.1A  | 0.04 sec., Min; 3 sec. Max  |
|                    | 0.125A - 6.3A | .15 sec., Min; 3 sec. Max   |
| 1000%              | 0.04A - 0.1A  | .01 sec., Min; 0.3 sec. Max |
|                    | 0.125A - 6.3A | .02 sec., Min; 0.3 sec. Max |









### Agency Approvals

| Agency | Agency File/Certificate Number                           | Ampere Range    |
|--------|--|-----------------|
| PS     | Cartridge:<br>NBK220604-E10480A<br>DPC NBK230604-E10480A | 1A - 5A<br>6.3A |
|        | Leaded:<br>NBK220604-E10480B<br>NBK230604-E10480B        | 1A - 5A<br>6.3A |
| CCC    | CCC self declaration<br>No.:2020970207000068             | 0.040A-6.3A     |
| cULus  | E10480   | 0.040A - 6.3A   |
| SP     | 29862  | 0.125A - 6.3A   |
| S      | 1620075  | 0.040A - 6.3A   |
| DVE    | 40016080   | 0.040A - 6.3A   |
| VD     | KM41462  | 0.125A - 6.3A   |
| CE     | N/A  | 0.040A - 6.3A   |
| EAC    | RU C-DE.HB26.B.01385/21                                  |                 |

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### Electrical Characteristic Specifications by Item

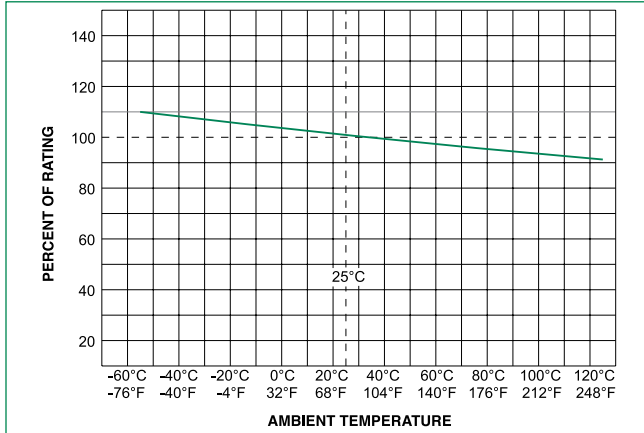
| Amp Code | Amp Rating (A) | Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting Pt (A <sup>2</sup> sec) | Maximum Voltage Drop at Rated Current (mV) | Maximum Power Dissipation at 1.5I <sub>n</sub> (W) | Agency Approvals  |   |   |   |   |   |   |   |
|----------|----------------|--------------------|---------------------|--------------------------------|---|--|--|---|---|---|---|---|---|---|---|
|          |                |                    |                     |                                |   |  |  |  |  |  |  |  |  |  |  |
| .040     | 0.040          | 250                | 150A @ 250VAC       | 31.8620                        | 0.01640                                 | 4000                                       | 1.6  |   |   | x   |   | x   | x   | x   |   |
| .050     | 0.050          | 250                |                     | 21.2920                        | 0.01700                                 | 3500                                       | 1.6  |   |   | x   |   | x   | x   | x   |   |
| .063     | 0.063          | 250                |                     | 14.2685                        | 0.03800                                 | 3000                                       | 1.6  |   |   | x   |   | x   | x   | x   |   |
| .100     | 0.100          | 250                |                     | 6.0180                         | 0.07900                                 | 2500                                       | 1.6  |   |   | x   |   | x   | x   | x   |   |
| .125     | 0.125          | 250                |                     | 4.2000                         | 0.13000                                 | 2000                                       | 1.6  | x   |   | x   | x   | x   | x   | x   | x   |
| .160     | 0.160          | 250                |                     | 2.5500                         | 0.31000                                 | 1900                                       | 1.6  | x   |   | x   | x   | x   | x   | x   | x   |
| .200     | 0.200          | 250                |                     | 1.6000                         | 0.32000                                 | 1500                                       | 1.6  | x   |   | x   | x   | x   | x   | x   | x   |
| .250     | 0.250          | 250                |                     | 1.0495                         | 0.54000                                 | 1300                                       | 1.6  | x   |   | x   | x   | x   | x   | x   | x   |
| .315     | 0.315          | 250                |                     | 0.8475                         | 1.23000                                 | 1100                                       | 1.6  | x   |   | x   | x   | x   | x   | x   | x   |
| .400     | 0.400          | 250                |                     | 0.5350                         | 1.40000                                 | 1000                                       | 1.6  | x   |   | x   | x   | x   | x   | x   | x   |
| .500     | 0.500          | 250                |                     | 0.3700                         | 3.00000                                 | 900  | 1.6  | x   |   | x   | x   | x   | x   | x   | x   |
| .630     | 0.630          | 250                |                     | 0.2750                         | 4.82000                                 | 300  | 1.6  | x   |   | x   | x   | x   | x   | x   | x   |
| .800     | 0.800          | 250                |                     | 0.1635                         | 9.35000                                 | 250  | 1.6  | x   |   | x   | x   | x   | x   | x   | x   |
| 001.     | 1.00           | 250                |                     | 0.1165                         | 19.20000                                | 150  | 1.6  | x   | x   | x   | x   | x   | x   | x   | x   |
| 1.25     | 1.25           | 250                |                     | 0.0817                         | 27.15000                                | 150  | 1.6  | x   | x   | x   | x   | x   | x   | x   | x   |
| 01.6     | 1.60           | 250                |                     | 0.0551                         | 44.20000                                | 150  | 1.6  | x   | x   | x   | x   | x   | x   | x   | x   |
| 002.     | 2.00           | 250                |                     | 0.0452                         | 92.70500                                | 150  | 1.6  | x   | x   | x   | x   | x   | x   | x   | x   |
| 02.5     | 2.50           | 250                |                     | 0.0305                         | 138.00000                               | 120  | 1.6  | x   | x   | x   | x   | x   | x   | x   | x   |
| 3.15     | 3.15           | 250                |                     | 0.0231                         | 202.00000                               | 100  | 1.6  | x   | x   | x   | x   | x   | x   | x   | x   |
| 004.     | 4.00           | 250                |                     | 0.0158                         | 330.00000                               | 100  | 1.6  | x   | x   | x   | x   | x   | x   | x   | x   |
| 005.     | 5.00           | 250                | 0.0117              | 544.00000                      | 100                                     | 1.6  | x  | x   | x   | x   | x   | x   | x   | x   |   |
| 06.3     | 6.3            | 250                | 0.0107              | 1093.03500                     | 100                                     | 1.6  | x  | x   | x   | x   | x   | x   | x   | x   |   |

\*4A-6.3A have an Interrupting rating 100A@350Vac.

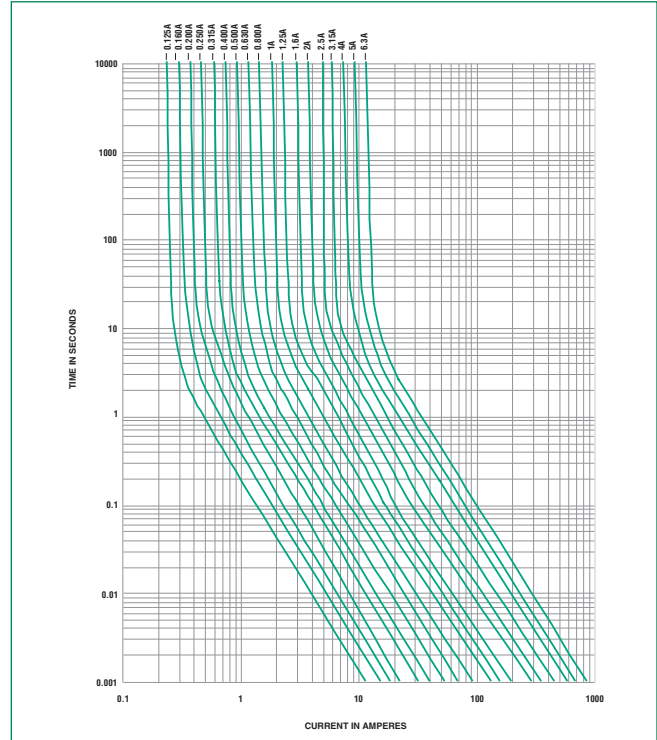
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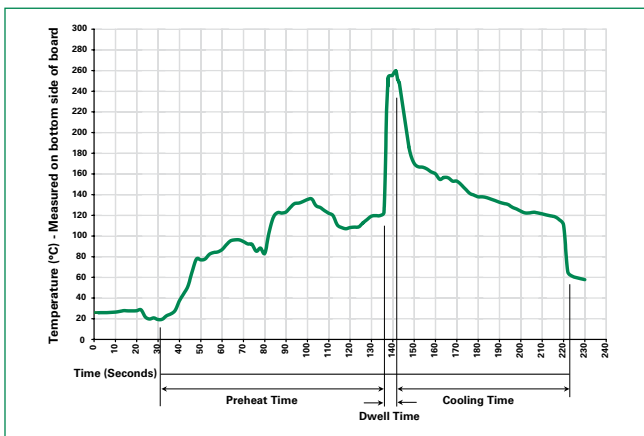
Temperature Re-rating Curve



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.

**Packaging**

| Packaging Option    | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width     |
|---------------------|-------------------------|----------|---------------------------|------------------|
| <b>219XA Series</b> |                         |          |                           |                  |
| Bulk                | N/A                     | 1000     | MXA                       | N/A              |
| Bulk                | N/A                     | 1000     | MXAE                      | N/A              |
| Reel and Tape       | EIA 296-E               | 1000     | MRAET1                    | T1=53mm (2.087") |
| Bulk                | N/A                     | 1000     | MXG                       | N/A              |

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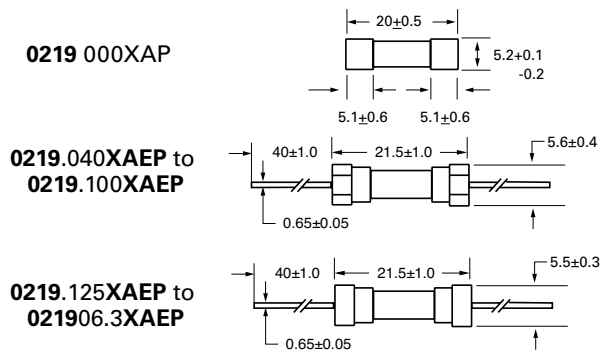
### Product Characteristics

|                          |   |
|--------------------------|---|
| <b>Materials</b>         | Body: Glass<br>Cap: Nickel Plated Brass<br>Leads: Tin Plated Copper                     |
| <b>Terminal Strength</b> | MIL-STD-202, Method 211.<br>Test Condition A  |
| <b>Solderability</b>     | MIL-STD-202 Method 208  |
| <b>Product Marking</b>   | Cap 1: Brand logo, current and voltage rating<br>Cap 2: Agency approval markings Series |
| <b>Packaging</b>         | Available in Bulk (M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel)                |

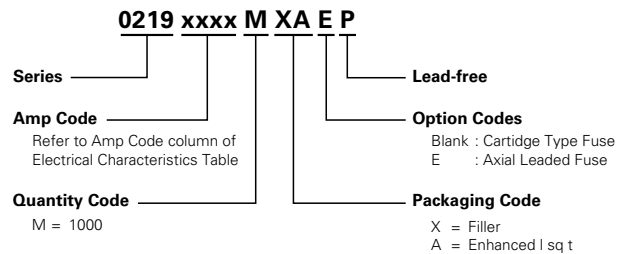
|                              |  |
|------------------------------|--|
| <b>Operating Temperature</b> | -55°C to +125°C  |
| <b>Shock</b>                 | MIL-STD-202, Method 107, Test Condition B: (5 cycles -65°C to +125°C)                                  |
| <b>Vibration</b>             | MIL-STD-202, 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

All dimensions in mm



### Part Numbering System



### Recommended Accessories

| Accessory Type | Series                  | Description   | Max Application Voltage | Max Application Amperage |
|----------------|-------------------------|---|-------------------------|--------------------------|
| Holder         | <a href="#">345_ISF</a> | Panel Mount Shock-Safe Fuseholder   | 250                     | 10                       |
|                | <a href="#">345</a>     | Shock-Safe Fuseholder with PC Mount, Solder Mount and Panel Mount options |                         | 20                       |
|                | <a href="#">830</a>     | PC Mount Shock-Safe Miniature Fuseholder                                  |                         | 16                       |
| Block          | <a href="#">520</a>     | Metric OMNI-BLOK® Fuse Block  |                         | 10                       |
|                | <a href="#">646</a>     | PC Mount Miniature Fuse Block   |                         | 6.3                      |
|                | <a href="#">658</a>     | Surface Mount Miniature Fuse Block  |                         | 10                       |
| Clip           | <a href="#">520_WV</a>  | PC Mount Miniature Fuse Clip  |                         | 6.3                      |
|                | <a href="#">111</a>     | PC Board Mount Fuse Clip  |                         | 10                       |
|                | <a href="#">445</a>     | PC Board Mount Fuse Clip  |                         | 10                       |

- Notes:**
- Do not use in applications above rating.
  - Please refer to fuseholder data sheet for specific re-rating information.
  - Please contact factory for applications greater than the max voltage and amperage shown.

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