



Description

5x20mm fast-acting glass body cartridge fuse designed to IEC specification.











Features

- Designed to International (IEC) Standards for use globally
- Meets the IEC 60127-2, Sheet 2 specification for fast-acting fuses
- Available in cartridge and axial lead form
- RoHS compliant and lead-free

Applications

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

Agency Approvals

| Agency | Agency File Number | Ampere Range |
|---|---|---|
|  | Cartridge Certificates: NBK120802-E10480 A&C Leaded Certificates: NBK120802-E10480 B&D | 1A – 5A 6.3A – 15A 1A – 5A 6.3A – 15A |
|  | Certificates: 2002010207007600 2002010207007599 | 32mA – 800mA 1A – 6.3A |
|  | Certificates: SU05001-3004 SU05001-2005 SU05001-2006 SU05001-2007 | 32mA – 40mA 50mA – 315mA 400mA – 6.3A 8A & 10A |
|  | E10480 JDYX2 | 32mA – 6.3A |
|  | File: 029862 Acc. Class: LR1422-30 | |
|  | License: KM41462 | 400mA – 6.3A |
|  | File: 948103, 915516, 304518 & 304555 | 32mA – 6.3A |
|  | License: 40014645 | 32mA – 6.3A, 8A*, 10A* |
|  | License: 40016647 | 15A* |
|  | | 32mA – 15A |

*Approval for cartridge versions only

Electrical Characteristics for Series

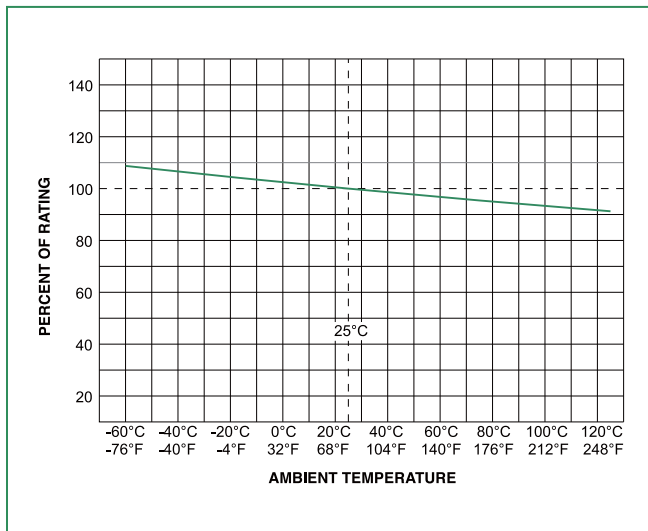
| % of Ampere Rating | Ampere Rating | Opening Time |
|--------------------|---------------|--------------------------------|
| 150% | 32mA-100mA | 60 minutes, Minimum |
| | 125mA-6.3A | 60 minutes, Minimum |
| | 8A-15A | 30 minutes, Minimum |
| 210% | 32mA-100mA | 30 minutes, Maximum |
| | 125mA-6.3A | 30 minutes, Maximum |
| | 8A-15A | 30 minutes, Maximum |
| 275% | 32mA-100mA | 0.01 sec., Min.; .5 sec. Max. |
| | 125mA-6.3A | 0.05 sec., Min.; 2 sec. Max. |
| | 8A-15A | 0.05 sec., Min.; 2 sec. Max. |
| 400% | 32mA-100mA | .003 sec., Min.; 0.1 sec. Max. |
| | 125mA-6.3A | .01 sec., Min.; 0.3 sec. Max. |
| | 8A-15A | .01 sec., Min.; 0.4 sec. Max. |
| 1000% | 32mA-100mA | .02 second, Maximum |
| | 125mA-6.3A | .02 second, Maximum |
| | 8A-15A | .04 second, Maximum |

Electrical Characteristic Specifications by Item

| Amp Code | Amp Rating (A) | Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting I ² t (A ² sec) | Nominal Voltage Drop at Rated Current (mV) | Nominal Power Dissipation At Rated Current (W) | Agency Approvals | | | | | | | | | |
|----------|----------------|--------------------|---------------------|--------------------------------|---|--|--|------------------|-----|----|----|----|---|----|-----|----|----|
| | | | | | | | | UL | CCC | PS | RU | SP | S | CE | D'E | UL | UL |
| .032 | 0.032 | 250 | 35A@250Vac | 262.2000 | 0.00006 | 10000 | 1.6 | x | x | | x | x | x | x | x | | |
| .040 | 0.04 | 250 | | 183.1500 | 0.00008 | 8000 | 1.6 | x | x | | x | x | x | x | x | | |
| .050 | 0.05 | 250 | | 15.2000 | 0.00019 | 7000 | 1.6 | x | x | | x | x | x | x | x | | |
| .063 | 0.063 | 250 | | 10.4500 | 0.00056 | 5000 | 1.6 | x | x | | x | x | x | x | x | | |
| .080 | 0.08 | 250 | | 7.8900 | 0.00083 | 4000 | 1.6 | x | x | | x | x | x | x | x | | |
| .100 | 0.1 | 250 | | 5.6965 | 0.00450 | 3500 | 1.6 | x | x | | x | x | x | x | x | | |
| .125 | 0.125 | 250 | | 3.8200 | 0.00478 | 2000 | 1.6 | x | x | | x | x | x | x | x | | |
| .160 | 0.16 | 250 | | 2.5250 | 0.01000 | 2000 | 1.6 | x | x | | x | x | x | x | x | | |
| .200 | 0.2 | 250 | | 1.7000 | 0.02000 | 1700 | 1.6 | x | x | | x | x | x | x | x | | |
| .250 | 0.25 | 250 | | 1.2325 | 0.04000 | 1400 | 1.6 | x | x | | x | x | x | x | x | | |
| .315 | 0.315 | 250 | | 0.8800 | 0.11000 | 1300 | 1.6 | x | x | | x | x | x | x | x | | |
| .400 | 0.4 | 250 | | 0.2770 | 0.12500 | 1200 | 1.6 | x | x | | x | x | x | x | x | x | |
| .500 | 0.5 | 250 | | 0.2065 | 0.21500 | 1000 | 1.6 | x | x | | x | x | x | x | x | x | |
| .630 | 0.63 | 250 | | 0.1900 | 0.41000 | 650 | 1.6 | x | x | | x | x | x | x | x | x | |
| .800 | 0.8 | 250 | | 0.1203 | 0.85000 | 240 | 1.6 | x | x | | x | x | x | x | x | x | |
| 001. | 1 | 250 | | 0.0964 | 1.04500 | 200 | 1.6 | x | x | x | x | x | x | x | x | x | |
| 1.25 | 1.25 | 250 | | 0.0701 | 2.23000 | 200 | 1.6 | x | x | x | x | x | x | x | x | x | |
| 016 | 1.6 | 250 | | 0.0528 | 4.61500 | 190 | 1.6 | x | x | x | x | x | x | x | x | x | |
| 002. | 2 | 250 | | 0.0416 | 5.73000 | 170 | 1.6 | x | x | x | x | x | x | x | x | x | |
| 02.5 | 2.5 | 250 | | 0.0334 | 9.46000 | 170 | 1.6 | x | x | x | x | x | x | x | x | x | |
| 3.15 | 3.15 | 250 | 0.0224 | 17.72000 | 150 | 2.5 | x | x | x | x | x | x | x | x | x | | |
| 004. | 4 | 250 | 40A@250Vac | 0.0165 | 29.16500 | 130 | 2.5 | x | x | x | x | x | x | x | x | | |
| 005. | 5 | 250 | 50A@250Vac | 0.0137 | 42.79500 | 130 | 2.5 | x | x | x | x | x | x | x | x | | |
| 06.3 | 6.3 | 250 | 63A@250Vac | 0.0095 | 62.46500 | 130 | 2.5 | x | x | x | x | x | x | x | x | | |
| 008. | 8 | 250 | 80A@250Vac | 0.0068 | 198.16000 | 130 | 4 | x | | x | | | | x | x* | | |
| 010. | 10 | 250 | 100A@250Vac | 0.0063 | 217.63500 | 130 | 4 | x | | x | | | | x | x* | | |
| 015. | 15 | 250 | 150A@250Vac | 0.0040 | 607.13500 | 130 | 4 | | | x | | | | x | x* | | |

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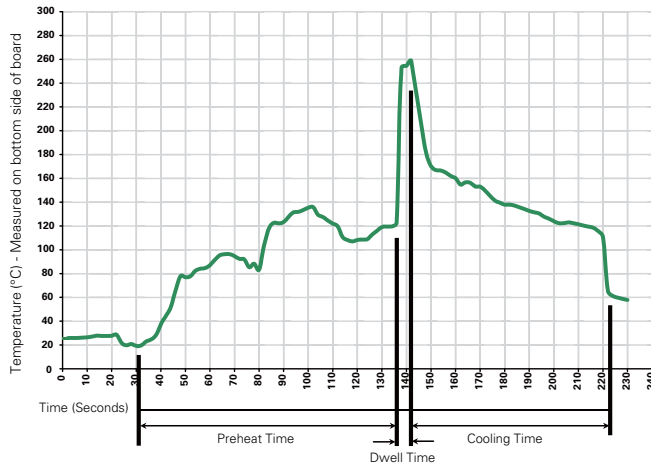
Temperature Derating Curve



Average Time Current Curves



Soldering Parameters - Wave Soldering



Recommended Process Parameters:

| Wave Parameter | Lead-Free Recommendation |
|---|-----------------------------------|
| Preheat: (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

| | |
|--------------------------|--|
| Material | Body: Glass Cap: Nickel-plated brass Leads: Tin-plated Copper |
| Terminal Strength | MIL-STD-202G, Method 211A, Test Condition A |
| Solderability | Reference IEC 60127 Second Edition 2003-01 Annex A |
| Product Marking | Cap1: Brand logo, current and voltage ratings Cap2: Agency approval marks |
| Packaging | Available in Bulk (M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel) |

| | |
|------------------------------|---|
| Operating Temperature | -55°C to +125°C |
| Thermal Shock | MIL-STD-202G, Method 107G, Test Condition B: (5 cycles -65°C to +125°C) |
| Vibration | MIL-STD-202G, Method 201A |
| Humidity | MIL-STD-202G, Method 103B, Test Condition A. high RH (95%) and elevated temperature (40°C) for 240 hours. |
| Salt Spray | MIL-STD-202G, Method 101D, Test Condition B |

Dimensions

0217 000P



0217.032 XEP
to
0217.315 XEP



0217.400 XEP
to
0217015 XEP



All dimensions in mm

Notes:

- * Ratings above 6.3A have 0.8 mm dia lead

Part Numbering System

0217 xxxx M X E P



Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|------------------|-------------------------|----------|---------------------------|------------------|
| Bulk | N/A | 1000 | MX | N/A |
| Bulk | N/A | 1000 | MXE | N/A |
| Reel and Tape | EIA 296-E | 1000 | MRET1 | T1=52mm (2.062") |