

RoHS  **235 Series, 5 x 20 mm, Fast-Acting Fuse**



Description

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






Features

- Designed to UL/CSA/ ANCE 248 Standard
- Available in cartridge and axial lead format
- 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: NBK290502-E10480 G NBK290502-E10480 I Leaded Certificates: NBK290502-E10480 H NBK290502-E10480 J | 1A – 5A 6A & 7A |
|  | Certificates: SU05001 – 3007 SU05001 – 2002 SU05001 – 2003 | 100mA – 400mA 500mA – 3A 4A – 6A |
|  | Listed File: E10480 Guide No: JDYX | 100mA - 7A |
|  | File No: 029862 Certificate Class No: LR1422-01 | 100mA – 3A 4A – 6A |
|  | | 100mA – 7A |

Electrical Characteristics for Series

| % of Ampere Rating | Ampere Rating | Opening Time |
|--------------------|---------------|--------------------|
| 100% | 100mA – 7A | 4 hours, Minimum |
| 135% | | 1 hour, Maximum |
| 200% | | 5 seconds, 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) | Agency Approvals | | | | |
|----------|----------------|--------------------|-------------------------------|--------------------------------|---|------------------|----|----|------|------|
| | | | | | | CE | UL | SF | PS E | RoHS |
| .100 | 0.1 | 250 | 35A@250Vac, 10000A@125Vac | 8.4000 | 0.00312 | x | x | x | | x |
| .125 | 0.125 | 250 | | 5.7500 | 0.00273 | x | x | x | | x |
| .200 | 0.2 | 250 | | 3.1500 | 0.00867 | x | x | x | | x |
| .250 | 0.25 | 250 | | 2.2500 | 0.01660 | x | x | x | | x |
| .300 | 0.3 | 250 | | 1.6000 | 0.03215 | x | x | x | | x |
| .400 | 0.4 | 250 | | 1.750 | 0.05845 | x | x | x | | x |
| .500 | 0.5 | 250 | | 0.4265 | 0.06915 | x | x | x | | x |
| .600 | 0.6 | 250 | | 0.3195 | 0.11200 | x | x | x | | x |
| .700 | 0.7 | 250 | | 0.2625 | 0.15600 | x | x | x | | x |
| .800 | 0.8 | 250 | | 0.1920 | 0.25300 | x | x | x | | x |
| 001. | 1 | 250 | 100A@250Vac, 10000A@125Vac | 0.1530 | 0.46750 | x | x | x | x | x |
| 1.25 | 1.25 | 250 | | 0.1055 | 1.08500 | x | x | x | x | x |
| 01.6 | 1.6 | 250 | | 0.0758 | 2.02500 | x | x | x | x | x |
| 002. | 2 | 250 | | 0.0603 | 2.64500 | x | x | x | x | x |
| 02.5 | 2.5 | 250 | | 0.0437 | 5.44500 | x | x | x | x | x |
| 003. | 3 | 250 | | 0.0347 | 8.39500 | x | x | x | x | x |
| 03.5 | 3.5 | 250 | 0.0331 | 17.14000 | x | x | | x | | |
| 004. | 4 | 125 | 10000@125Vac | 0.0246 | 17.14000 | x | x | x | x | x |
| 005. | 5 | 125 | | 0.0184 | 27.41000 | x | x | x | x | x |
| 006. | 6 | 125 | | 0.0148 | 47.32500 | x | x | x | x | x |
| 007. | 7 | 125 | | 0.0157 | 64.81500 | x | x | | x | |

Temperature Derating Curve



Average Time Current Curves



Please contact Littelfuse for details on FC curve for 7A rating

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

| | |
|--------------------------|---|
| Materials | 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 | Cap 1: Brand logo, current and voltage rating Cap 2: Series and agency approval markings |
| Packaging | Available in Bulk (M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel) |

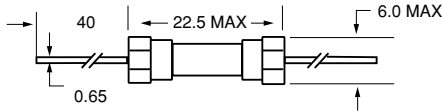
| | |
|------------------------------|--|
| Operating Temperature | -55°C to +125°C |
| Thermal Shock | MIL-STD-202G, Method 107G, Test Condition B: (5 cycles -65°C + 125°C) |
| Vibration | MIL-STD-202G, Method 201A |
| Humidity | MIL-STD-202G, Method 103B, Test Condition A high RH (95%) and elevated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

Dimensions

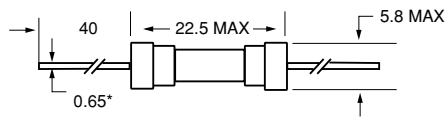
0235000P



**0235.100 XEP
to
0235.400 XEP**



**0235.500 XEP
to
0235006.XEP**



All dimensions in mm

Notes:

* Ratings above 6.3A
ø0.8 mm dia lead

Part Numbering System



Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|-------------------|-------------------------|----------|---------------------------|------------------|
| 235 Series | | | | |
| Bulk | N/A | 1000 | MX | N/A |
| Bulk | N/A | 1000 | MXB | N/A |
| Reel and Tape | EIA 296-E | 1000 | MRET1 | T1=52mm (2.062") |