

471 Series

PICO® II Time-Lag Fuse



Description

The 471 Series PICO® II Time-Lag Fuse is designed for applications that require moderate in-rush withstand and is in a space-saving subminiature package.

Features & Benefits

- Moderate in-rush withstand
- Small size
- Wide range of current ratings available (0.500A to 5A)
- RoHS compliant
- Halogen-free available
- Wide operating temperature range
- Low temperature de-rating

Additional Information



Resources



Accessories



Samples

Applications

- Flat-panel display TV
- LCD monitor
- Lighting systems
- Medical equipments
- Industrial equipments

Agency Approvals

| Agency | Agency File Number | Ampere Range |
|--------|--------------------|--------------|
| | E10480 | 0.5A - 5A |
| | 29862 | 0.5A - 5A |
| | NBK200416-JP1021 | 1A - 5A |
| | NA | 0.5 - 5A |

Electrical Characteristics

| % of Ampere Rating | Opening Time |
|--------------------|--------------------------|
| 100% | 4 Hours, Min. |
| 200% | 120 Seconds, Max. |

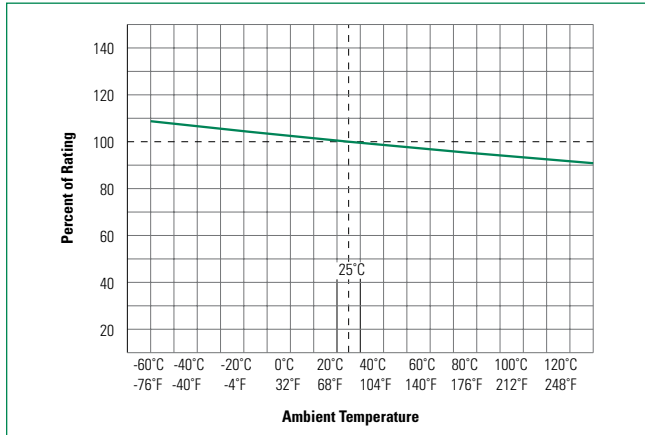
Electrical Characteristics

| Ampere Rating(A) | Amp Code | Max Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting I²t (A² sec) | Agency Approvals | | | |
|------------------|----------|------------------------|---------------------|--------------------------------|------------------------------|------------------|---|---|---|
| | | | | | | | | | |
| .500 | .500 | 125 | 50A@125VAC/DC | 0.1890 | 0.159 | - | X | - | X |
| 1.00 | 001. | 125 | | 0.0851 | 0.722 | X | X | X | X |
| 1.50 | 01.5 | 125 | | 0.0535 | 1.610 | X | X | X | X |
| 2.00 | 002. | 125 | | 0.0385 | 2.500 | X | X | X | X |
| 2.50 | 02.5 | 125 | | 0.0300 | 4.390 | X | X | X | X |
| 3.00 | 003. | 125 | | 0.0231 | 6.960 | X | X | X | X |
| 3.50 | 03.5 | 125 | | 0.0180 | 9.900 | X | X | X | X |
| 4.00 | 004. | 125 | | 0.0115 | 10.600 | X | X | X | X |
| 5.00 | 005. | 125 | | 0.0084 | 15.400 | X | X | X | X |

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Temperature Re-rating Curve



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

Soldering Parameters

Recommended Process Parameters:

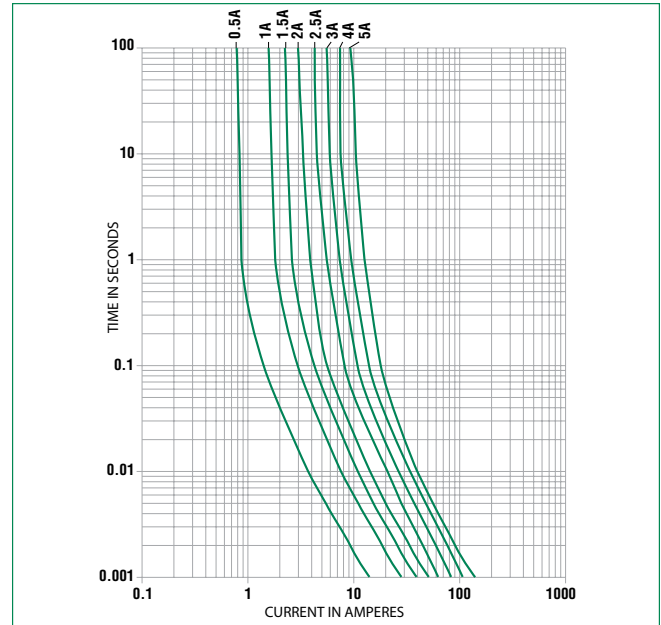
| Wave Parameter | Lead-Free Recommendation |
|--|-----------------------------------|
| Preheat: (Depends on Flux Activation Temperature) | (Typical Industry Recommendation) |
| Temperature Minimum: | 100°C |
| Temperature Maximum: | 150°C |
| Preheat Time: | 60-180 seconds |
| Solder Pot Temperature: | 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.

Average Time Current Curves



Product Characteristics

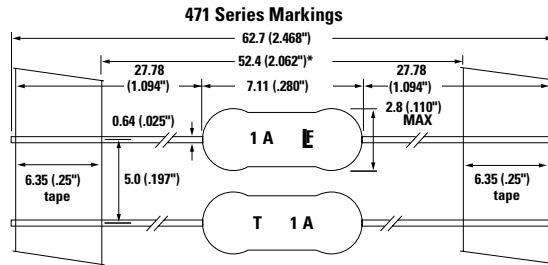
| | |
|----------------------------|---|
| Materials | Encapsulated, Epoxy-Coated Body; Solder Coated Copper wire leads; RoHS compliant Product: Pure Tin-coated Copper wire leads |
| Flammability Rating | UL 94V-0 |
| Solderability | MIL-STD-202, Method 208 |
| Lead Pull Force | MIL-STD-202, Method 211, Test Condition A (will withstand a 7 lbs. axial pull test) |

| | |
|-------------------------------------|--|
| Operating Temperature | -55°C to +125°C (Consider re-rating) |
| Shock | MIL-STD-202, Method 213, Test Condition I (100 G's peak for 6 milliseconds) |
| Vibration | MIL-STD-202, Method 201 (10-55 Hz); Method 204, Test Condition C (55-2000 Hz at 10 G's Peak) |
| Moisture Resistance | MIL-STD-202, Method 106 |
| Resistance to Soldering Heat | Withstands 60 seconds above 200°C and up to 260°C, maximum |

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Dimensions



Part Numbering System

| | 0471 | xxxx | N | R | T1 | L |
|--|------|------|---|---|----|---|
| Series | | | | | | |
| Current Rating | | | | | | |
| Refer to Amp Code column of Electrical Characteristics Table | | | | | | |
| Quantity | | | | | | |
| N = 5000 P = 2000 | | | | | | |
| Type of Packaging | | | | | | |
| R = Reel A = Ammo Pack | | | | | | |
| Lead Length | | | | | | |
| T1: 52.4mm (2.062")* | | | | | | |
| Environmental Options | | | | | | |
| Blank = RoHS L = RoHS + HF | | | | | | |

Packaging

| Packaging Option | Packaging Specification | Quantity & Packaging Code |
|------------------------------------|-------------------------|---|
| *T1: 52.4mm (2.062") Tape and Reel | EIA 296 | Please refer to available quantities above in "Part Numbering System" |

Notes:

* - T1 dimension is defined as the length of the component between the two tapes. The full component length is 62.7mm (2.468").