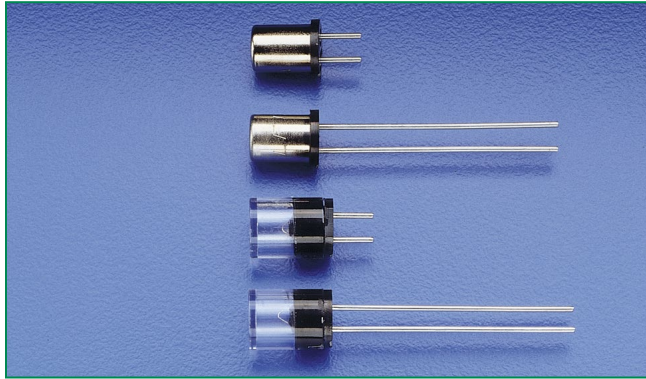


272/273/274/278/279 Series, MICRO™ Very Fast-Acting Fuse






Description

Developed originally for the U.S. Space Program, MICRO™ fuse provides reliability in a compact design. The MICRO™ fuse is available in plug-in or radial lead styles and a complete range of ampere ratings from 0.002A to 5A to suit a wide variety of design needs.

Features

- Military grade available
- High breaking capacity
- Clear cover option to view fuse element status
- Available from very low ampere of 0.002A to 5A
- Plug-in with short or long leads option
- Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14

Agency Approvals

| Agency | Agency File Number | Ampere Range |
|---|--------------------|--------------|
|  | E10480 | 0.002A - 5A |
|  | 29862 | 0.002A - 5A |
|  | QPL-23419 | 0.002A - 5A |




Applications

- Printed circuit boards and similar equipment
- Electronic components

Electrical Characteristics

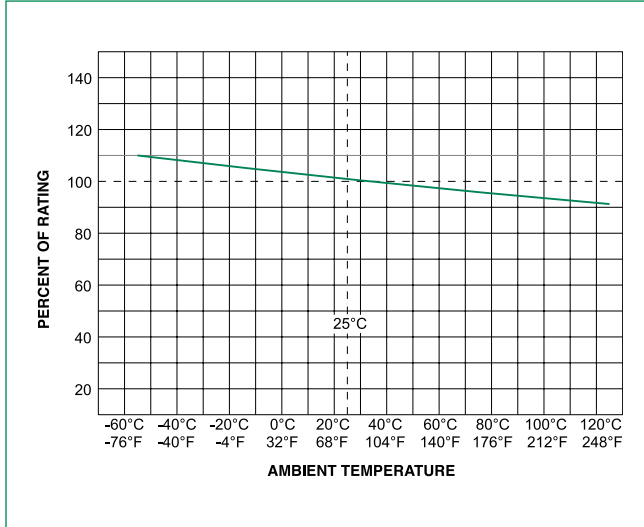
| % of Ampere Rating | Ampere Rating | Opening Time |
|--------------------|---------------|------------------------|
| 100% | 0.002 – 5 | 4 Hours, Min. |
| 200% | 0.002 – 0.3 | 5 Seconds, Max. |
| | 0.4 - 5 | 2 Seconds, Max. |

Electrical Characteristics

| Ampere Rating (A) | Amp Code (for all above series) | Max Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting I ² t (A ² sec) | Agency Approvals | | |
|-------------------|---------------------------------|------------------------|---------------------|--------------------------------|---|---|---|---|
| | | | | | |  |  |  |
| 0.002 | 0.002 | 125 | 10,000A@125VAC/VDC | 2200 | 0.00000000845 | X | X | X |
| 0.005 | 0.005 | 125 | | 280 | 0.0000000766 | X | X | X |
| 0.010 | 0.010 | 125 | | 80.0 | 0.000000462 | X | X | X |
| 0.015 | 0.015 | 125 | | 44.0 | 0.00000123 | X | X | X |
| 0.031 | 0.031 | 125 | | 16.0 | 0.00000810 | X | X | X |
| 0.050 | 0.050 | 125 | | 3.52 | 0.0000666 | X | X | X |
| 0.062 | 0.062 | 125 | | 2.55 | 0.000115 | X | X | X |
| 0.100 | 0.100 | 125 | | 1.38 | 0.000385 | X | X | X |
| 0.125 | 0.125 | 125 | | 1.0 | 0.000691 | X | X | X |
| 0.200 | 0.200 | 125 | | 2.30 | 0.00409 | X | X | X |
| 0.250 | 0.250 | 125 | | 1.75 | 0.00640 | X | X | X |
| 0.300 | 0.300 | 125 | | 1.25 | 0.00945 | X | X | X |
| 0.400 | 0.400 | 125 | | 0.227 | 0.0251 | X | X | X |
| 0.500 | 0.500 | 125 | | 0.167 | 0.0716 | X | X | X |
| 0.600 | 0.600 | 125 | | 0.430 | 0.0411 | X | X | X |
| 0.700 | 0.700 | 125 | | 0.324 | 0.0710 | X | X | X |
| 0.750 | 0.750 | 125 | | 0.293 | 0.0563 | X | X | X |
| 0.800 | 0.800 | 125 | | 0.271 | 0.113 | X | X | X |
| 1.00 | 001.0 | 125 | | 0.0880 | 0.0648 | X | X | X |
| 01.5 | 01.5 | 125 | | 0.0578 | 0.160 | X | X | X |
| 2.00 | 002.0 | 125 | | 0.0425 | 0.300 | X | X | X |
| 3.00 | 003.0 | 125 | | 0.0275 | 0.759 | X | X | X |
| *4.00 | 004.0 | 125 | | 0.0202 | 1.38 | X | X | X |
| *5.00 | 005.0 | 125 | | 0.0156 | 2.21 | X | X | X |

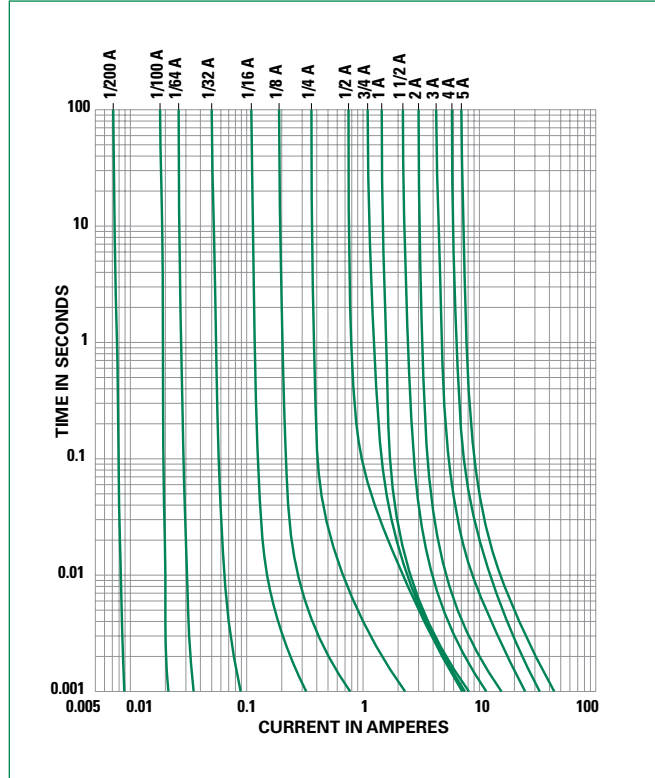
* The fuses of 4A and 5A for 272 and 278 Series are obsolete.

Temperature Re-rating Curve

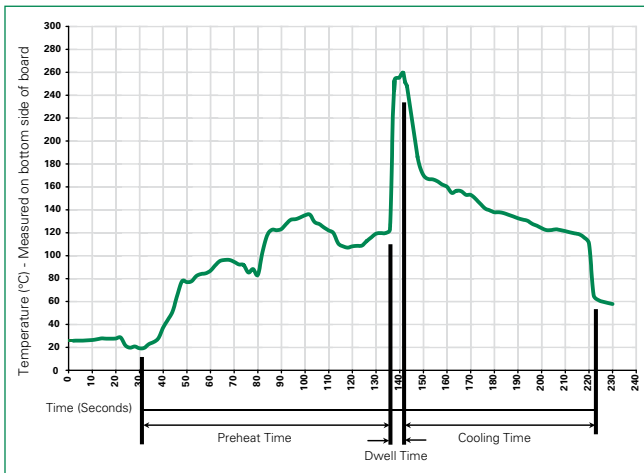


Note:
1. Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Average Time Current Curves



Soldering Parameters - Wave Soldering



Recommended Process Parameters:

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

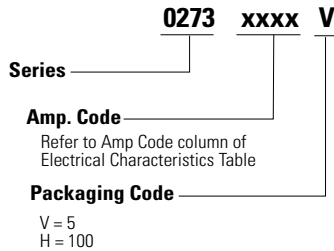
Solder Iron Temperature: 350° C +/- 5° C
Heating Time: 5 seconds max.

Note: These devices are not recommended for IR or Convection Reflow process.

Product Characteristics

| | |
|-------------------------------|---|
| Operating Temperature: | 273 and 279: -55°C to +85°C; 272 and 278: -55°C to +125°C |
| Fuses to MIL SPEC | Military QPL type (FM02). To order, change 273 to 274. |
| Materials | 272 and 278 series cap: Nickel Plated Brass 273, 274 and 279 series cap: Mirror polished Polycarbonate Base: R-4 Ryton Pins: Tin Plated Copper |
| Product Marking | Current and voltage ratings stamped on cap |

Part Numbering System



Additional Information



**Datasheet
272 Series**



**Datasheet
273 Series**



**Datasheet
274 Series**



**Datasheet
278 Series**



**Datasheet
279 Series**



**Resources
272 Series**



**Resources
273 Series**



**Resources
274 Series**



**Resources
278 Series**



**Resources
279 Series**



**Samples
272 Series**



**Samples
273 Series**



**Samples
274 Series**



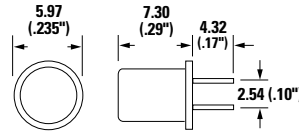
**Samples
278 Series**



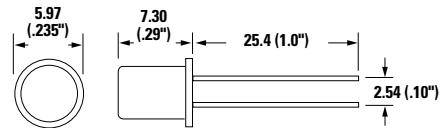
**Samples
279 Series**

Dimensions

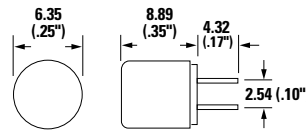
272 000 Series
(Short Lead, Metal Cap)



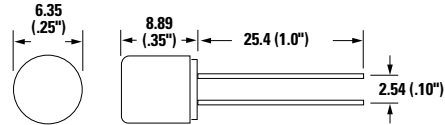
278 000 Series
(Long Lead, Metal Cap)



273 000 and 274 000 Series
(Short Lead, Clear Plastic Cap)



279 000 Series
(Long Lead, Clear Plastic Cap)



NOTE: Amperage and voltage rating stamped on cap.
Leads are tin plated copper; .025" diameter.

Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code |
|------------------|-------------------------|----------|---------------------------|
| Bulk | N / A | 5 | V |
| Bulk | N / A | 100 | H |

*Only V-pack version for low current rating from 0.002 - 0.062 (A) and for 274, 278, 279 Series

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