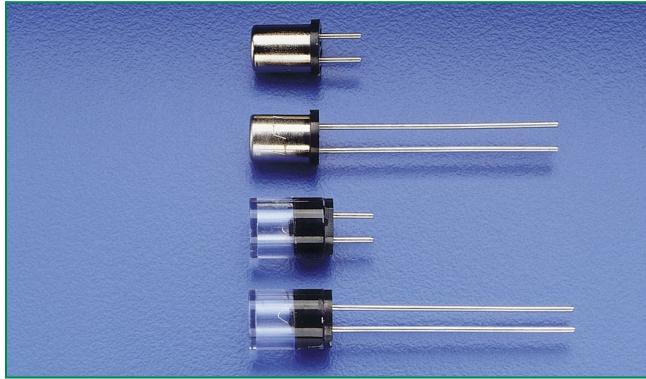


### 272/273/274/278/279 Series, MICRO™ Very Fast-Acting Fuse



#### 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

#### Applications

- Printed circuit boards and similar equipment
- Electronic components




#### Agency Approvals

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

#### Electrical Characteristics

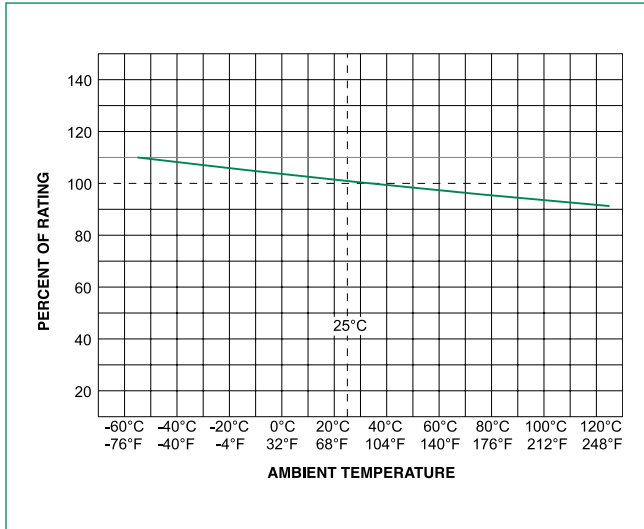
% of Ampere Rating	Ampere Rating	Opening Time
100%	0.002 – 5	4 Hours, <b>Min.</b>
200%	0.002 – 0.3	5 Seconds, <b>Max.</b>
	0.4 - 5	2 Seconds, <b>Max.</b>

#### Electrical Characteristics

Ampere Rating (A)	Amp Code (for all above series)	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I <sup>2</sup> t (A <sup>2</sup> 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

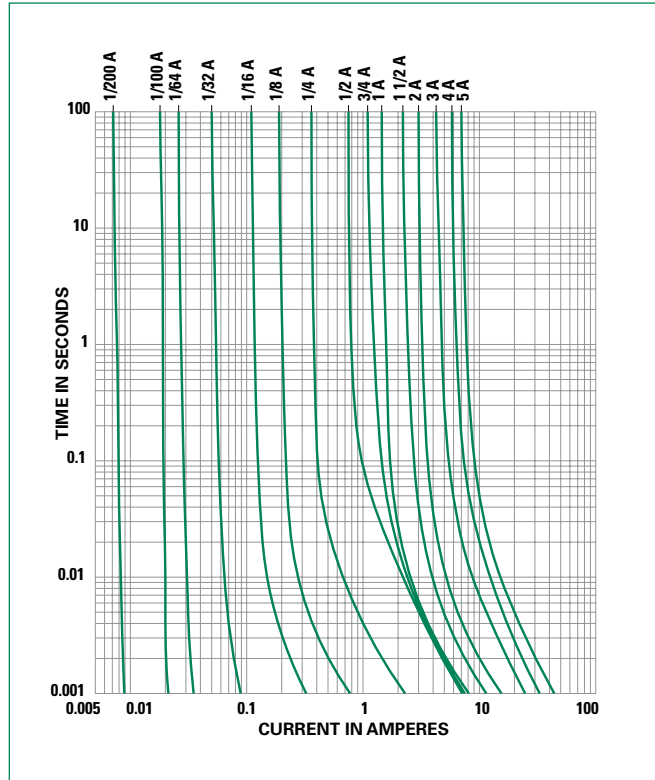
\* The fuses of 4A and 5A for 272 and 278 Series are obsolete.

## Temperature Re-rating Curve

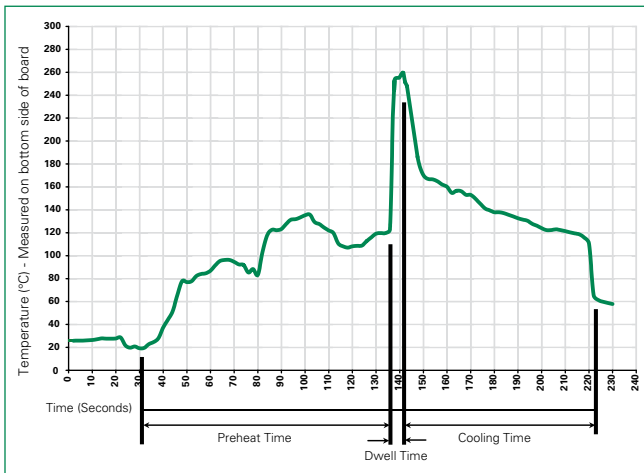


**Note:**  
1. Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

## Average Time Current Curves



## Soldering Parameters - Wave Soldering



## Recommended Process Parameters:

Wave Parameter	Lead-Free Recommendation
<b>Preheat:</b> (Depends on Flux Activation Temperature)	(Typical Industry Recommendation)
Temperature Minimum:	100° C
Temperature Maximum:	150° C
Preheat Time:	60-180 seconds
<b>Solder Pot Temperature:</b>	260° C Maximum
<b>Solder Dwell Time:</b>	2-5 seconds

### Recommended Hand-Solder Parameters:

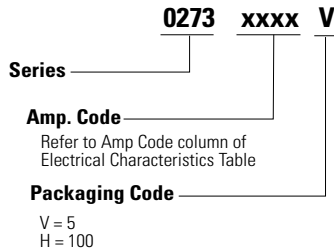
Solder Iron Temperature: 350° C +/- 5° C  
Heating Time: 5 seconds max.

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

### Product Characteristics

<b>Operating Temperature:</b>	273 and 279: -55°C to +85°C; 272 and 278: -55°C to +125°C
<b>Fuses to MIL SPEC</b>	Military QPL type (FM02). To order, change 273 to 274.
<b>Materials</b>	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
<b>Product Marking</b>	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**



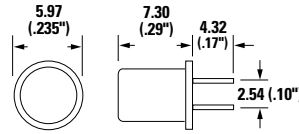
**Samples  
278 Series**



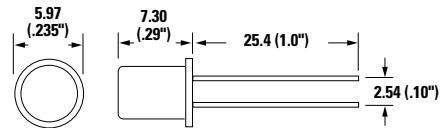
**Samples  
279 Series**

### Dimensions

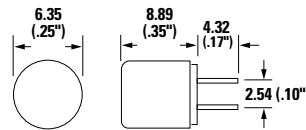
272 000 Series  
(Short Lead, Metal Cap)



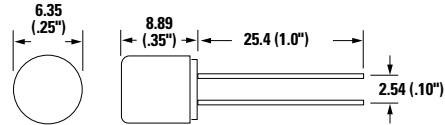
278 000 Series  
(Long Lead, Metal Cap)



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