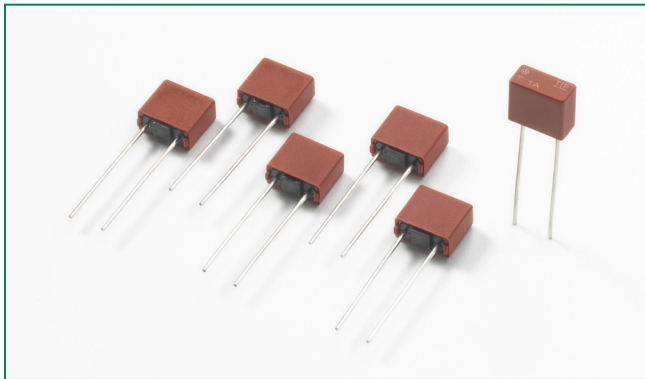



### 389 Series



#### Agency Approvals

Agency	Agency File Number	Ampere Range
		60mA

#### Description

The 389 Series are TR5®, time-lag type, 250V rated fuses. For Short Circuit Protection of Sensitive Electronic Components and Assemblies

#### Features

- For worldwide applications
- Reduced PCB space requirements
- Highly defined cut-off times
- Irreversible physical separation
- Low internal resistance
- Flame resistant encapsulated casing
- RoHS compliant and Lead-free
- Available for 60MA only

#### Applications

- Telecom equipment
- Data processing equipment
- Input/output modules
- Household appliances
- Medical equipment

#### Additional Information



Datasheet



Resources



Samples

#### Electrical Characteristics

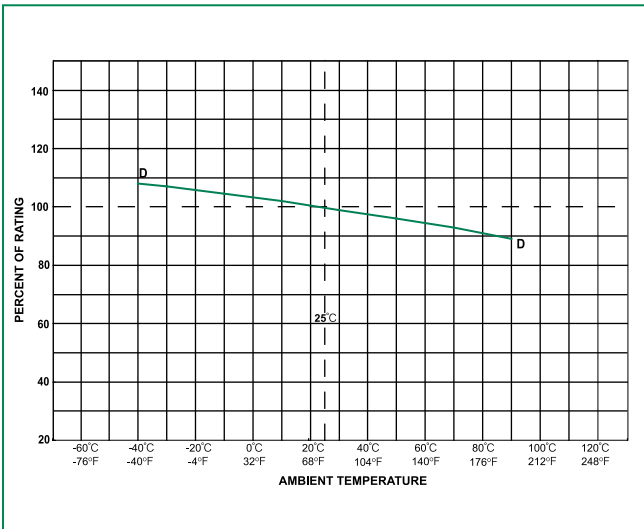
% of Ampere Rating	Opening Time
166	600 ms, <b>Min.</b>
250	45 ms, <b>Max.</b>

#### Electrical Characteristics

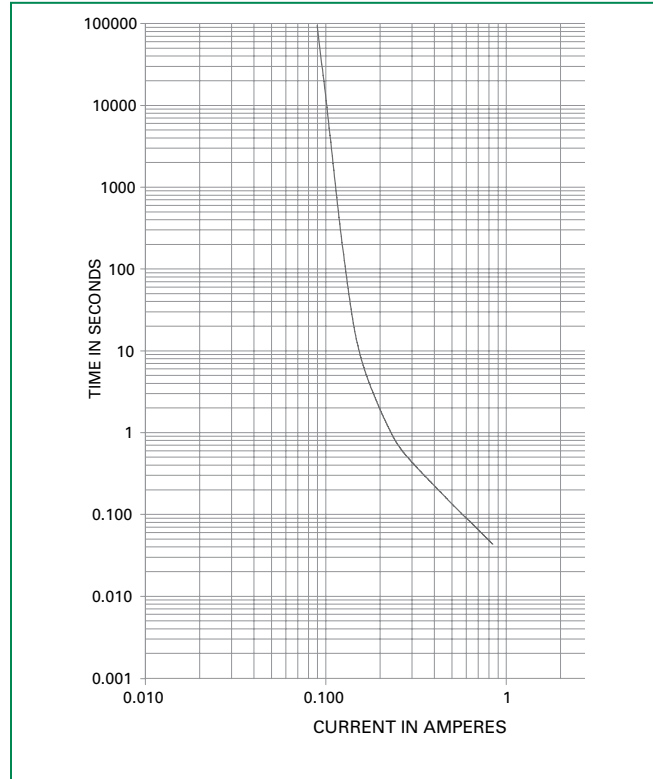
Continuous Current $I_c$	Type	Amp Code	Voltage Rating	Fault Current max.	Cold Resistance $0.1 \times I_c$ typ. (m $\Omega$ )	Power Dissipation $1.0 \times I_c$ max. (mW)	Melting Integral $10 \times I_c$ typ. (A <sup>2</sup> s)
60mA		0060	250 VAC	10A / 250VAC/DC 50-60 Hz $\cos \phi = 1.0$	80	100	0.033

Note: 1.00 means the number one with two decimal places. 1,000 means the number one thousand.

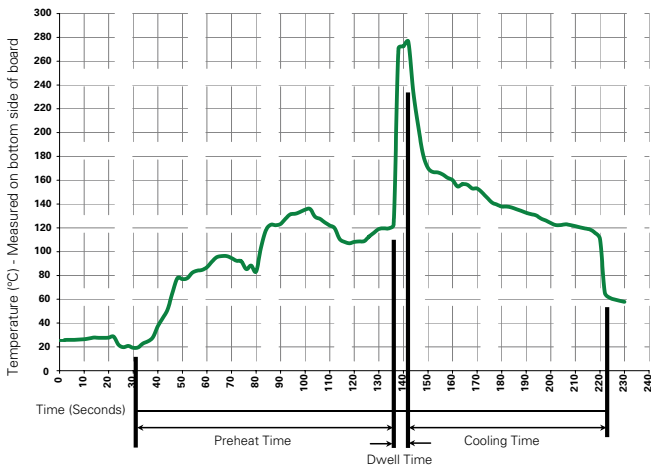
**Temperature Derating Curve**



**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>	280°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.

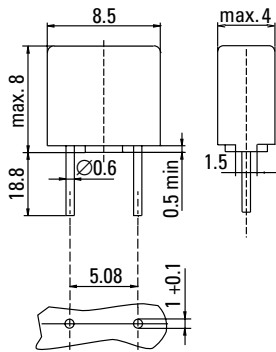
**Note: These devices are not recommended for IR or Convection Reflow process.**

### Product Characteristics

<b>Materials</b>	Base/Cap: Brown Thermoplastic Polyamide PA 6.6, UL 94V-0 Round Pins: Copper, Tin-plated
<b>Lead Pull Strength</b>	10N (EN 60068-2-21)
<b>Solderability</b>	260°C, ≤ 3 sec. (Wave) 350°C, ≤ 1 sec. (Hand)
<b>Soldering Heat Resistance</b>	260°C, 10 sec. (IEC 60068-2-20)

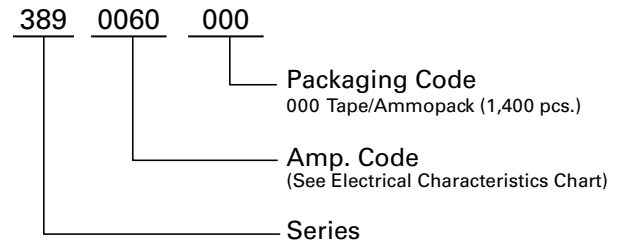
<b>Operating Temperature</b>	-40°C to +85°C (consider de-rating)
<b>Climatic Category</b>	-25°C/+70°C/21 days (EN 60068-1..3)
<b>Stock Conditions</b>	+10°C to +60°C RH, ≤ 75% yearly average, without dew, maximum value for 30 days-95%
<b>Vibration Resistance</b>	24 cycles at 15 min. each (EN 60068-6) 10 - 60 Hz at 0.75 mm amplitude 60 - 2000 Hz at 10 g acceleration

### Dimensions



Holes in PCB

### Part Numbering System



### Packaging

Packaging Code	Packing Option	Quantity
000	Tape/Ammopack	1400