

# **Description**

The 389 Series are TE5®, Time-Lag type, 250V rated fuses. They are specifically designed for short circuit protection of sensitive electronic components and assemblies

# **Features**

- Reduced PCB space requirements
- Highly defined cut-off times
- Low internal resistance
- Flame resistant encapsulated casing
- RoHS compliant and Leadfree

# **Additional Information**



Resources





Accessories

Samples

# **Applications**

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

# **Agency Approvals**

Agency	Agency File Number	Ampere Range
c <b>FLL</b> us	E67006	0.060A
UK	NA	0.060A

#### **Electrical Characteristics**

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

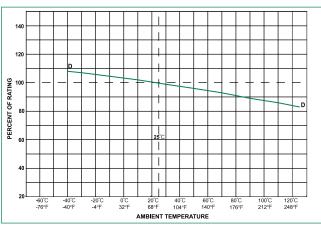
# **Electrical Characteristics**

Amp Code	Rated Current	Voltage Rating	Breaking Capacity	Cold Resistance 0.1In (mΩ)	Power Dissipation (mW)	Melting Integral 10In (A <sup>2</sup> s)	c <b>711</b> us
0060	60mA	250 VAC	10A@250VAC	6080	100	0.033	E67006



# **389 Series** TE5® Fuse, Time-Lag

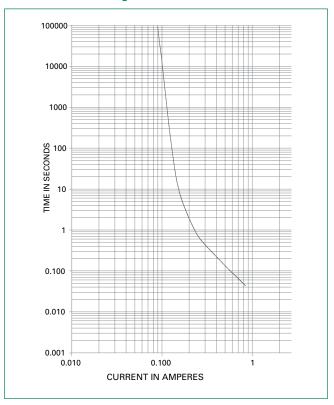
#### **Temperature Re-rating Curve**



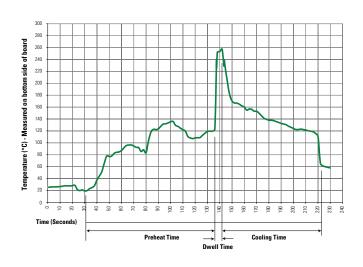
Note:

1. Rerating 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:	280°C Maximum
Solder Dwell Time:	2-5 seconds

#### **Recommended Hand-Solder Parameters:**

Solder Iron Temperature:  $350^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Heating Time: 5 seconds max.

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

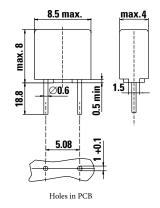


# **Product Characteristics**

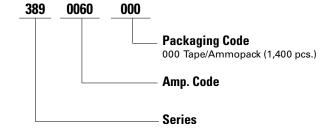
Materials	Base/Cap: Black Thermoplastic Polyamide PA 66, UL 94V-0 Round Pins: Copper, Tin–plated
Lead Pull Strength	10N (IEC 60068-2-21)
Solderability	260°C, ≤ 3 sec. (Wave) 350°C, ≤ 1 sec. (Hand)
Soldering Heat Resistance	260°C, 10 sec. (IEC 60068-2-20)

Operating Temperature	-40°C to +125°C (consider re-rating)
Climatic Category	-25°C/+70°C/21 days (IEC 60068-13)
Stock Conditions	+10°C to +60°C RH, ≤ 75% yearly average, without dew, maximum value for 30 days-95%
Vibration Resistance	24 cycles at 15 min. each (IEC 60068-6) 10 - 60Hz at 0.75mm amplitude 60 - 2000Hz at 10g acceleration

# Dimensions (mm)



# **Part Numbering System**



#### **Packaging**

Packaging Code	Packing Option	Quantity
000	Tape/Ammopack	1400

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