# 429 Series 1206 Fast-Acting Fuse



Agency A	pprovals	
AGENCY	AGENCY FILE NUMBER	AMPERE RANGE
<b>FL</b>	E10480	7A
(A)	29862	7A

Electrical Characteristics for Series		
% of Ampere Rating	Opening Time at 25°C	
100%	4 hours, Minimum	
200%	5 sec., Maximum	
300%	0.2 sec., Maximum	

### Description

The 429 Series Fast-Acting SMF is a small (1206 size) thinfilm device designed for secondary protection of circuits used in space constrained applications such as hand-held portable electronic devices.

This series is Halogen-Free, Lead-Free and meets the requirements of the RoHS directive.

#### Features

- RoHS compliant and Lead-Free 7A device available-add 'L' suffix to part number.
- For new designs up to 5A please consult the 433 or 466 Series

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• Halogen-Free 7A device available-add 'HF' suffix to the part number

#### Applications

Secondary protection for space constrained applications such as:

- Cell phones
- Battery packs
- DVD players
- Hard disk drives.
- Digital cameras

### Additional Information









1. Measured at 10% of rated current, 25°C.

2. Measured at rated voltage.



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



#### Note:

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

#### Example:

- For continuous operation at 70 degrees celsius, the fuse should be derated s follows: I = (0.75)(0.80)|\_{RAT} = (0.60)| $_{RAT}$
- The temperature derating curve represents the nominal conditions. For questions about temperature derating curve, please consult Littelfuse technical support for assistance.

#### **Average Time Current Curves**



#### **Soldering Parameters**

Reflow Co	ndition	Pb – Free assembly
	-Temperature Min (T <sub>s(min)</sub> )	150°C
Pre Heat	-Temperature Max (T <sub>s(max)</sub> )	200°C
	-Time (Min to Max) (t <sub>s</sub> )	60 – 180 secs
Average ra (T <sub>L</sub> ) to pea	amp up rate (LiquidusTemp k	5°C/second max
$T_{S(max)}$ to $T_{I}$	- Ramp-up Rate	5°C/second max
Poflow	- Temperature (T <sub>L</sub> ) (Liquidus)	217°C
nellow	- Temperature (t <sub>L</sub> )	60 – 150 seconds
PeakTemp	erature (T <sub>P</sub> )	250 <sup>+0/-5</sup> °C
Time with Temperatu	in 5°C of actual peak ıre (t <sub>p</sub> )	20 – 40 seconds
Ramp-dov	vn Rate	5°C/second max
Time 25°C	to peakTemperature (T <sub>P</sub> )	8 minutes Max.
Do not exc	ceed	260°C

Wave Soldering	260°C, 10 seconds max.
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#### **Product Characteristics**

Materials	<b>Body:</b> Epoxy Substrate <b>Terminations, RoHS Compliant Device (429L):</b> 100% Tin over Nickel over Copper <b>Element Cover Coat:</b> Conformal Coating NOTE: Do not use alcohol-based cleaners or solvents with 429 Series Thin-Film Fuses as it may damage the coating.
Operating Temperature	– 55°C to 90°C. Consult temperature re-rating chart. For operation above 90°C contact Littelfuse.
Thermal Shock	Withstands 5 cycles of – 55°C to 125°C

Humidity	MIL-STD-202, Method 103 Condition D
Vibration	Withstands 10 – 55 Hz per MIL- STD-202, Method 201 and 10-2000 Hz at 20 g's per MIL-STD-202, Method 204, Condition D.
Insulation Resistance (After Opening)	Greater than 10,000 ohms
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition D

#### Dimensions

#### RECOMMENDED PAD LAYOUTS



<b>Part Marking</b>	System
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Series	Marking Code
429L	7

## Part Numbering System



Packaging			
Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
Tape & Reel – 8mm tape	EIA-481 Rev. D (IEC 60286, part 3)	3000	WRM

# **Mouser Electronics**

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Littelfuse:

<u>429.2</u> <u>429.25</u> <u>429.5</u> <u>429002</u> <u>429.125</u> <u>429.375</u> <u>429001</u> <u>4291.25</u> <u>42901.5</u> <u>42902.5</u> <u>429003</u> <u>429004</u> <u>429005</u> 429007 0429007.WRML R429.250 0429004.WRM 0429007.WRM 042902.5WRM 0429007.WRMLHF