

### 462 Series Fuse



#### Description

The 462 series Nano<sup>2</sup> Surface Mount Fuse has time-lag current characteristics with interrupting ratings rated at 250V and 350V. It complies with IEC 60127-4 Universal Modular Fuse-Links.






#### Features

- Heat resistant plastic housing, UL 94 V-0
- Designed for line or low voltage applications
- Low voltage drop
- Internationally approved
- High pulse resistance
- Lead-free – compatible with lead-free solders and higher temperature profiles
- Available in ratings of 0.5A to 5A

#### Applications

- Lighting ballast
- AC/DC adaptor primary protection
- Transformerless AC/DC converter circuit
- High DC voltage power distribution system

#### Agency Approvals

AGENCY	AGENCY FILE NUMBERS	AMPERE RANGE
	E67006	0.5A - 4A
	40022235 40027839	1A, 1.6A, 3.15A, 4A 2A
	JET1896-31007-1005	2.5A - 5A
	CQC14012115883	1.6A
	E242325	0.5A - 5A

#### Additional Information



Datashheet



Resources








Samples

#### Electrical Characteristics for Series

% of Amp Rating	Opening Time
125%	1 hour, Minimum
200%	2 minutes, Maximum
1000%	10 milliseconds, Minimum 100 milliseconds, Maximum

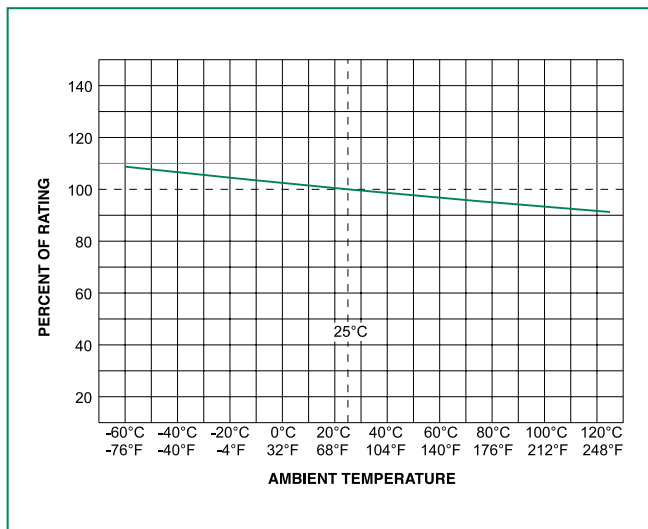
#### Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Max Voltage Rating (V) <sup>5</sup>	Interrupting Rating	Nominal Cold Resistance (Ohms) <sup>1</sup>	Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec)	Nom Voltage Drop (mV)	Nom Power Dissipation (mW)	Agency Approvals <sup>3</sup>				
												
0.500	0500	250	100A @ 350VAC/VDC <sup>4</sup> 150A @ 250VAC/VDC	0.2270	0.43	160	200	X		X		
0.630	0630			0.1570	0.80	160	200	X		X		
0.800	0800			0.1300	1.40	160	250	X		X		
1.00	1100			0.0867	2.70	140	250	X	X	X		
1.25	1125			0.0602	5.20	130	250	X		X		
1.60	1160			0.0443	9.70	130	280	X	X	X	X	
2.00	1200			0.0335	5.44	120	300	X	X	X		
2.50	1250			0.0278	8.00	120	450	X		X		X
3.15	1315			0.0204	14.00	110	600	X	X	X		X
4.00	1400			0.0158	21.00	110	800	X	X	X		X
5.00	1500		150A @ 250VAC/VDC	0.0124	40.00	110	1000	X		X		X

1. Cold resistance measured at less than 10% of rated current at 23°C  
 2. I<sup>2</sup>t values slated for 8ms opening time  
 3. Agency Approval Table Key: X = Approved or Certified, P = Pending  
 4. UL Recognition - IR at 100A @ 350 VAC/VDC  
 5. Rated at 350VAC/VDC per UL Recognition under UL248 (up to 4A only).  
 Rated at 250VAC/VDC per VDE under IEC standard 60127-4.

If you have special electrical characteristic needs, please contact Littelfuse to discuss application specific options.

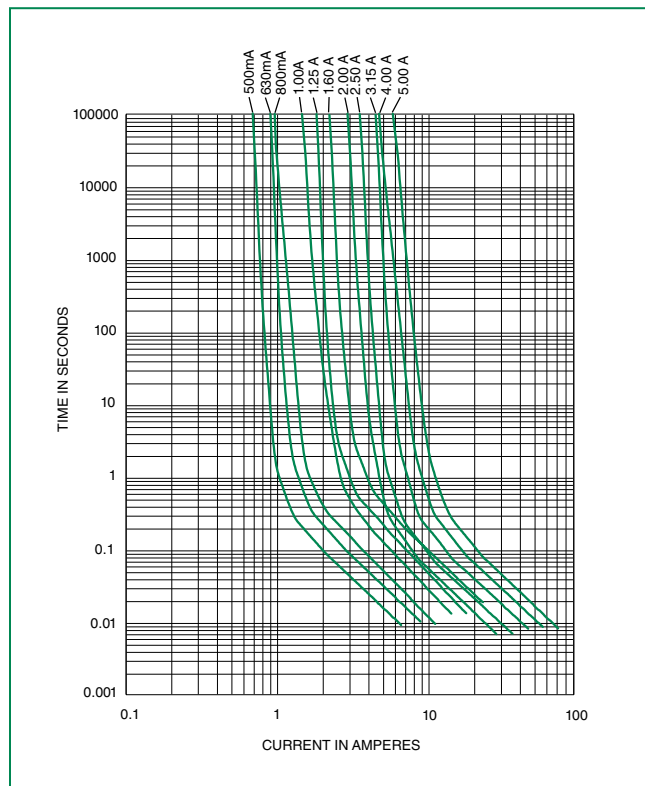
### Temperature Re-rating Curve



Note:

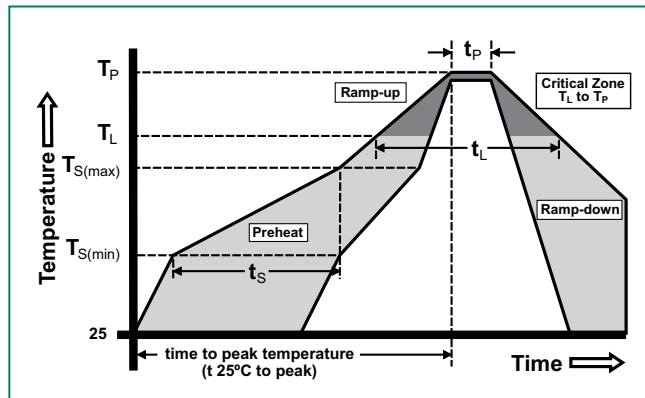
1. Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

### Average Time Current Curves



### Soldering Parameters

Reflow Condition		Pb – free assembly
Pre Heat	- Temperature Min ( $T_{s(min)}$ )	150°C
	- Temperature Max ( $T_{s(max)}$ )	200°C
	- Time (Min to Max) ( $t_s$ )	60 – 120 seconds
Average Ramp-up Rate (LiquidusTemp ( $T_L$ ) to peak)		5°C/second max.
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		5°C/second max.
Reflow	- Temperature ( $T_L$ ) (Liquidus)	217°C
	- Temperature ( $t_L$ )	60 – 90 seconds
Peak Temperature ( $T_p$ )		250 <sup>+0/-5</sup> °C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		5°C/second max.
Time 25°C to peak Temperature ( $T_p$ )		8 minutes max.

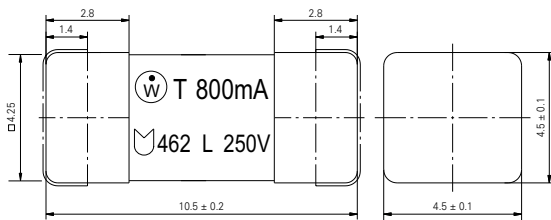


**Product Characteristics**

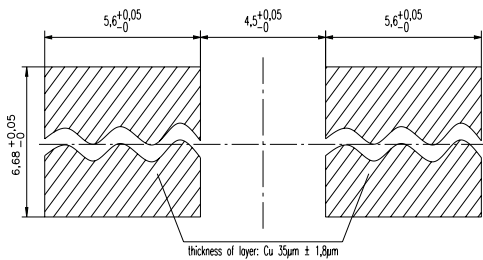
<b>Materials</b>	<b>Body:</b> Plastic UL 94 V-0 <b>Cap:</b> Tin-plated brass
<b>Product Marking</b>	<b>Body:</b> Brand Logo, "T" for Time-Lag, Current Rating, L Voltage Rating, UMF logo
<b>Solderability</b>	IEC 60068-2-58
<b>Resistance to Soldering Heat</b>	IEC 60068-2-58

<b>Operating Temperature</b>	-40°C to +85°C with proper derating
<b>Climatic Category</b>	IEC60068-1, -2-1, -2-2, -2-78 (-40°C to +85°C / 21 days)
<b>Vibration</b>	IEC60068-6 (24 cycles of 15 mins each, 1-60 Hz at 0.75mm amplitude, 60-2000 Hz at 10g acceleration)
<b>Moisture Sensitivity Level</b>	J-STD-020, Level 1

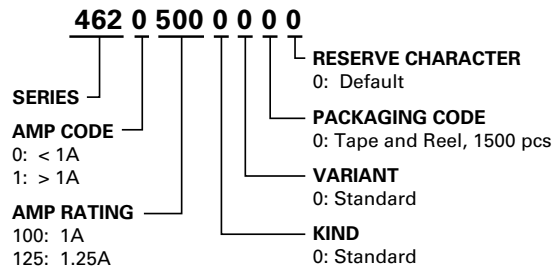
**Dimensions**



**Recommended Pad Layout**



**Part Numbering System**



**Examples:**

0.5 amp (500mA) product is  
462 **0 500** 0 0 0 0

5.0 amp product is  
462 **1 500** 0 0 0 0

Please refer to Amp Code column of the Electrical Specifications table on the first page of this document.

**Packaging**

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
16mm Tape and Reel	IEC 60286, part 3	1500	0