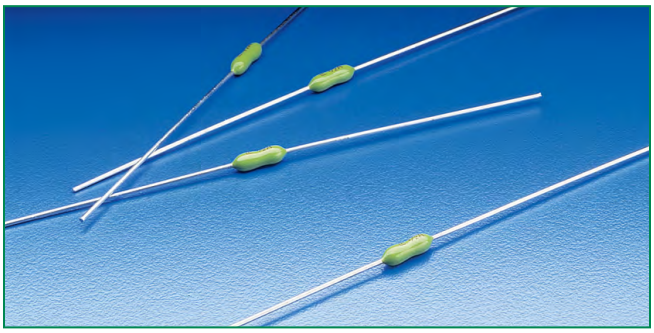
491 Series, PICO® II, Very Fast-Acting Fuse



Agency Approvals

Agency	Agency File Number	Ampere Range
	E10480	125mA - 10A
	LR 29862	125mA - 10A
	JET 1896-31007-1001	1A - 5A

Description

The PICO® II Very Fast-Acting Fuse is designed to meet an extensive array of performance characteristics in a space-saving subminiature package.

Features

- Very fast-acting
- Small size
- Wide current rating range (125mA - 10A)
- RoHS compliant
- Halogen-free available
- Wide operating temperature range
- Low temperature de-rating

Applications

Secondary protection for space constrained applications

- Flat–panel display TV
- LCD monitor
- LCD backlight inverter
- Office machines
- Power supply
- Audio/Video system
- Lighting system
- Medical equipment

Electrical Characteristics

% of Ampere Rating	Ampere Rating	Opening Time
100%	1/8-10	4 Hours, **Min.**
300%	1/8-10	0.3 Seconds, **Max.**

Electrical Characteristics

Ampere Rating (A)	Amp Code	Ordering Number (Std.)	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Agency Approvals		
.125	0.125	0491.125	125	50A at 125Vac and Vdc	1.7000	x	x	
.200	0.200	0491.200	125		0.8950	x	x	
.250	0.250	0491.250	125		0.6650	x	x	
.315	0.315	0491.315	125		0.5000	x	x	
.400	0.400	0491.400	125		0.3230	x	x	
.500	0.500	0491.500	125		0.3020	x	x	
.630	0.630	0491.630	125		0.2050	x	x	
.750	0.750	0491.750	125		0.1750	x	x	
.800	0.800	0491.800	125		0.1480	x	x	
1.00	001.	0491 001.	125		0.1280	x	x	x
1.25	1.25	0491 1.25	125		0.1000	x	x	x
1.50	01.5	0491 01.5	125		0.0823	x	x	x
1.60	01.6	0491 01.6	125		0.0700	x	x	x
2.00	002.	0491 002.	125		0.0473	x	x	x
2.50	02.5	0491 02.5	125		0.0360	x	x	x
3.00	003.	0491 003.	125		0.0295	x	x	x
3.15	3.15	0491 3.15	125		0.0275	x	x	x
3.50	03.5	0491 03.5	125		0.0240	x	x	x
4.00	004.	0491 004.	125		0.0204	x	x	x
5.00	005.	0491 005.	125		0.0158	x	x	x
7.00	007.	0491 007.	86		0.0107	x	x	
10.00	010.	0491 010.	86		0.0072	x	x	

Note: Higher ampere ratings are available. Please contact Littelfuse Technical Support or your Littelfuse products representative for assistance.

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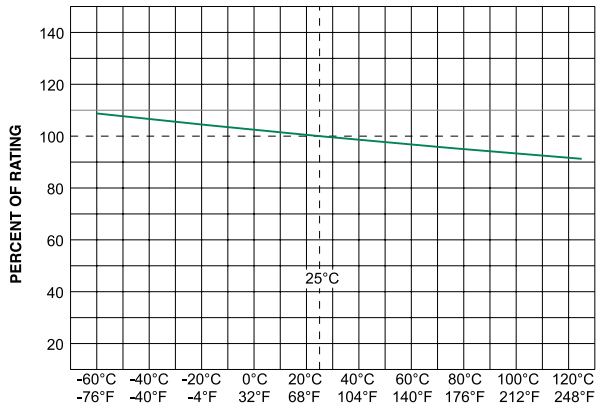
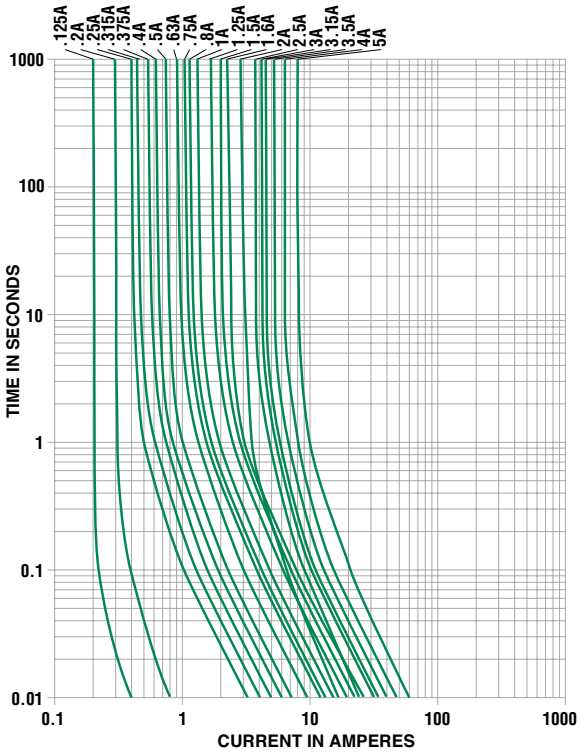
Temperature Rerating Curve



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

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:	260° C Maximum
Solder Dwell Time:	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.

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Axial Lead & Cartridge Fuses

PICO® II > Very Fast-Acting > 491 Series

Product Characteristics

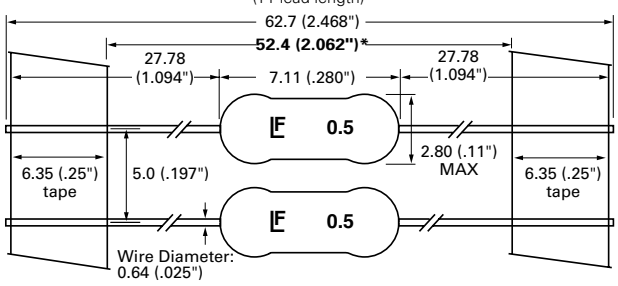
Materials	Encapsulated, Epoxy-Coated Body: Pure Tin-coated Copper wire leads
Solderability	MIL-STD-202, Method 208
Lead Pull Force	MIL-STD-202, Method 211, Test Condition A (will withstand a 7lbs. axial pull test)

Operating Temperature	–55°C to +125°C
Shock	MIL-STD-202, Method 213, Test Condition I (100 G's peak for 6 milliseconds)
Vibration	MIL-STD-202, Method 201 (10–55 Hz); Method 204, Test Condition C (55–2000 Hz at 10 G's Peak)
Moisture Resistance	MIL-STD-202, Method 106
Resistance to Soldering Heat	Withstands 60 seconds above 200°C and up to 260°C, maximum
Flammability Rating	UL 94V–0

Dimensions

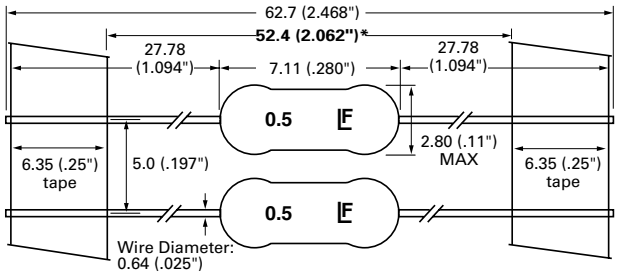
491 Series (RoHS Version) Markings

(T1 lead length)



491 Series (RoHS and Halogen-free Version) Markings

(T1 lead length)



Part Numbering System

0491 xxxx N R T1 HF

Series

Current Rating
Refer to Amp Code column of Electrical Characteristics Table

Quantity
N = 5000
M = 1000

Type of Packaging
R = Reel
A = Ammo Pack

Lead Length
The default lead length for Ammo pack and Loose pack is now T1
T1 = 52.4mm (2.062")

Option Codes
Blank = RoHS
HF = RoHS and Halogen-free

Packaging

Packaging Option	Packaging Specification	Quantity & Packaging Code
*T1: 52.4mm (2.062") Tape and Reel	EIA 296	Please refer to available quantities above in "Part Numbering System"

Notes: * T1 dimension is defined as the length of the component between the two tapes. The full component length is 62.7mm (2.468").

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