

SinglFuse™ SF-1206FP Series Features

- Fast acting precision thin film chip fuse for overcurrent protection
- 3216 (EIA 1206) miniature footprint
- Surface mount packaging for automated assembly
- UL listed (UL 248-14)
- RoHS compliant* and halogen free**

SF-1206FP Series - Fast Acting Precision Surface Mount Fuses

Electrical Characteristics

Model	Rated Current (Amps)	Fusing Time	Resistance (mΩ) Typ.***	Rated Voltage	Breaking Capacity	Typical I ² t (A ² s) ****
SF-1206FP050	0.50	Open within 5 sec. at 200 % rated current	527.5	DC 63 V	DC 63 V 50 A	0.015
SF-1206FP080	0.80		211			0.040
SF-1206FP100	1.00		145.5			0.062
SF-1206FP125	1.25		90			0.094
SF-1206FP150	1.50		83			0.141
SF-1206FP200	2.00		57			0.285
SF-1206FP250	2.50		37	DC 32 V	DC 32 V 50 A	0.445
SF-1206FP300	3.00		26			0.639
SF-1206FP400	4.00		18			1.109
SF-1206FP500	5.00		13			1.710
SF-1206FP700	7.00		9			3.300

*** Resistance value measured with less than 10 % of rated current. Tolerance ±25 %.

****Typical I²t value measured at 10x rated current.

Reliability Testing

No.	Test	Requirement	Test Condition
1	Carrying Capacity	No fusing	Rated current, 4 hours
2	Fusing Time	Within 5 seconds	200 % of its rated current
3	Interrupting Ability	No mechanical damages	After the fuse is interrupted, rated voltage applied for 30 seconds again
4	Bending Test	No mechanical damages	Distance between holding points: 90 mm, Bending: 3 mm, 1 time, 30 seconds
5	Resistance to Solder Heat	±20 %	260 °C ±5 °C, 10 seconds ±1 second
6	Solderability	95 % coverage minimum	235 °C ±5 °C, 2 ±0.5 second 245 °C ±5 °C, 2 ±0.5 second (lead free)
7	Temperature Rise	<75 °C	100 % of its rated current, measure of surface temperature
8	Resistance to Dry Heat	±20 %	105 °C ±5 °C, 1000 hours
9	Resistance to Solvent	No evident damage on protective coating and marking	23 °C ±5 °C of isopropyl alcohol, 90 seconds
10	Residual Resistance	10k ohms or more	Measure DC resistance after fusing
11	Thermal Shock	ΔR < 10 %	-20 °C / +25 °C / +125 °C / +25 °C, 10 cycles

Agency Recognition

UL File Number E198545

Environmental Characteristics

Operating Temperature.....-20 °C to +105 °C
Storage Conditions

Temperature+5 °C to +35 °C

Humidity.....40 % to 75 %

Shelf Life..... 2 years from manufacturing date

Moisture Sensitivity Level 1

ESD Classification (HBM)..... Class 6



WARNING Cancer and Reproductive Harm

www.P65Warnings.ca.gov

* RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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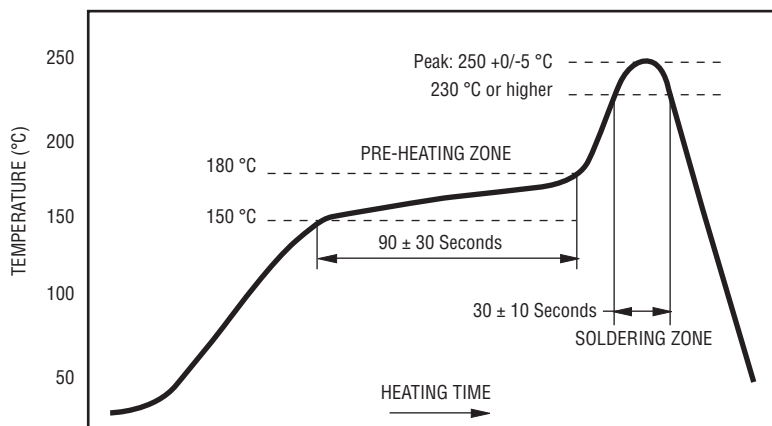
SinglFuse™ SF-1206FP Series Applications

- Portable memory
- LCD monitors
- Disk drives
- PDAs
- Digital cameras
- DVDs
- Cell phones
- Rechargeable battery packs
- Battery chargers
- Set top boxes
- Industrial controllers

SF-1206FP Series - Fast Acting Precision Surface Mount Fuses

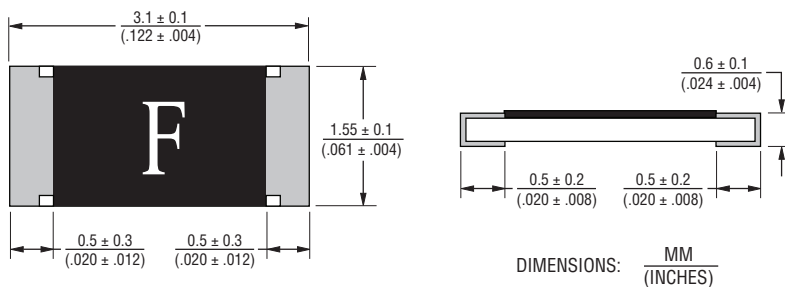
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Solder Reflow Recommendations

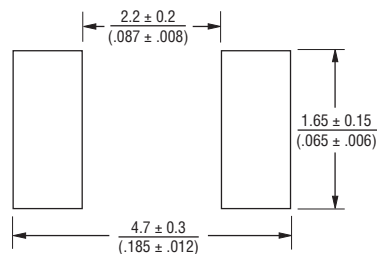


PEAK: 250 ± 0/-5 °C, 5 seconds
 PRE-HEATING ZONE: 150 to 180 °C, 90 ± 30 seconds
 SOLDERING ZONE: 230 °C or higher, 30 ± 10 seconds

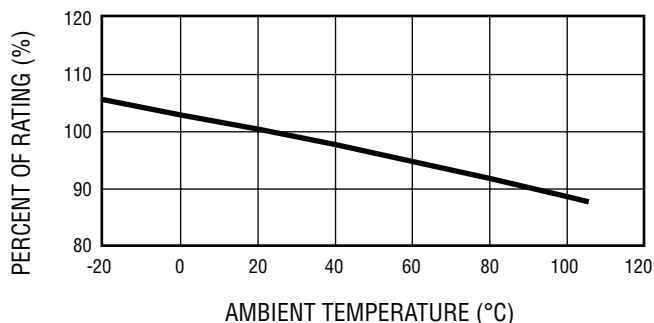
Product Dimensions



Recommended Pad Layout



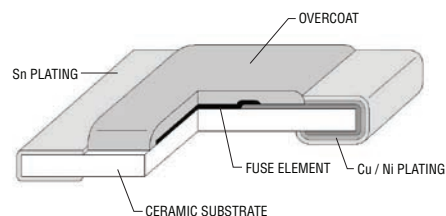
Thermal Derating Curve



Packaging Quantity

5,000 pieces per 7-inch reel

Construction & Material Content



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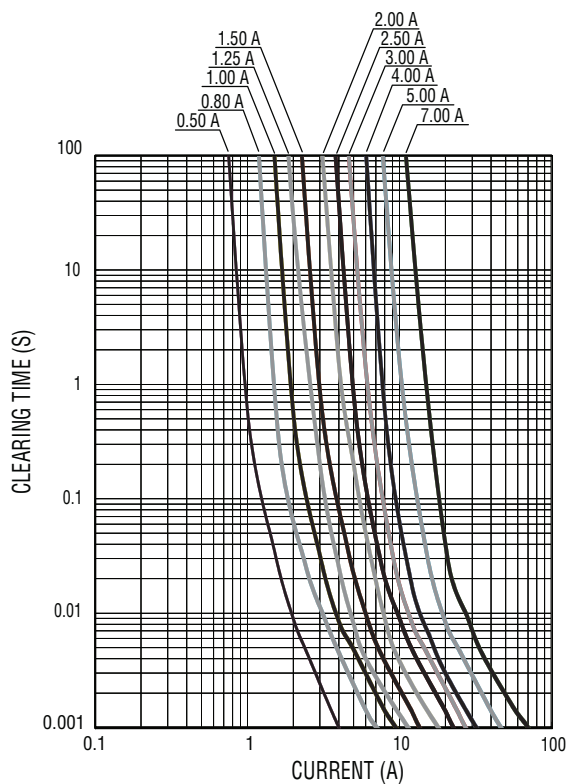
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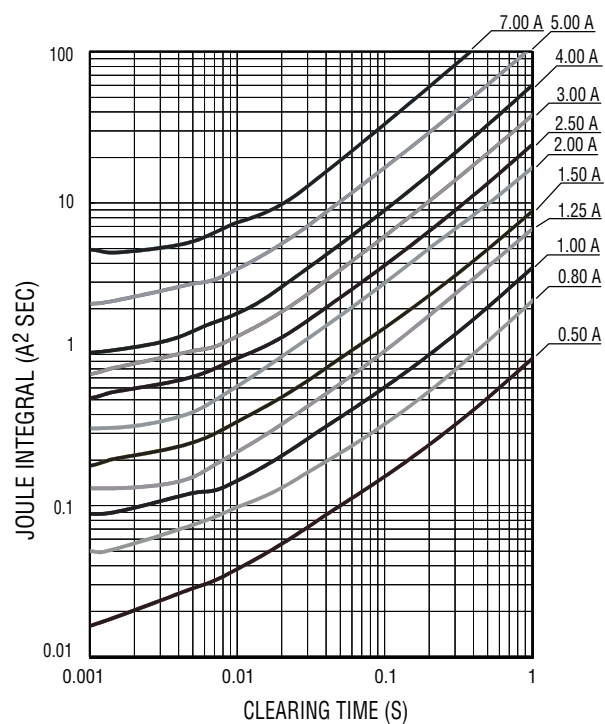
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Average Time Current Curves



Minimum I²T V Clear Time Curves



Typical Part Marking

Represents total content. Layout may vary.



RATED CURRENT (A)
 F = 0.50 T = 2.50
 K = 0.80 3 = 3.00
 L = 1.00 W = 4.00
 M = 1.25 Y = 5.00
 P = 1.50 Z = 7.00
 S = 2.00

How to Order

SinglFuse™
 Product Designator **SF - 1206 FP 050 - 2**
 SMD Footprint **3216 (EIA 1206) size**
 Fuse Blow Type **FP = Fast acting precision**
 Rated Current **050-700 (500 mA - 7.00 A)**
 Packaging Type **- 2 = Tape & Reel (5,000 pcs./reel)**

REV. D 01/19

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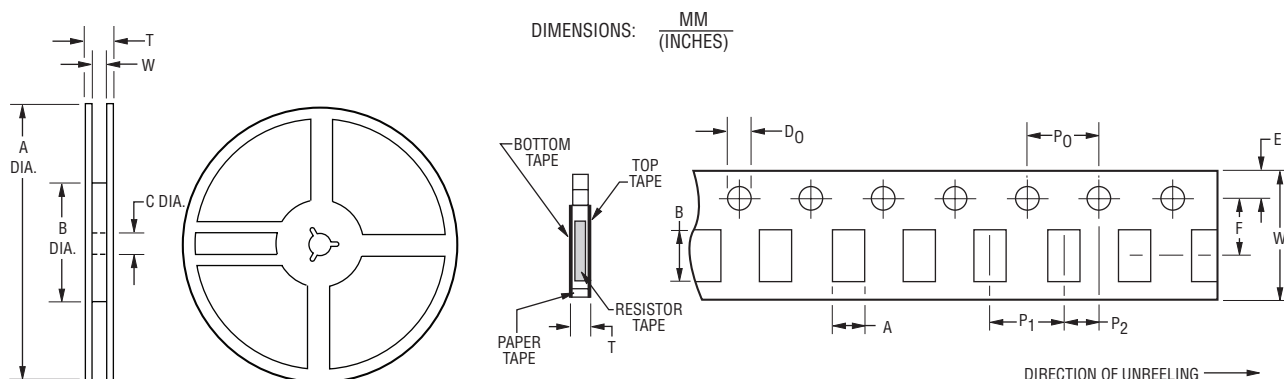
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SF-1206FP Series Tape and Reel Specifications

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Tape Dimensions	SF-1206FP Series per EIA 481-2
W	$\frac{8.0 \pm 0.2}{(.315 \pm .008)}$
P ₀	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$
P ₁	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$
P ₂	$\frac{2.0 \pm 0.05}{(.079 \pm .002)}$
A	$\frac{2.0 \pm 0.15}{(.079 \pm .006)}$
B	$\frac{3.6 \pm 0.2}{(.142 \pm .008)}$
F	$\frac{3.5 \pm 0.05}{(.138 \pm .002)}$
E	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$
D ₀	$\frac{1.5 \pm 0.1/-0}{(.059 \pm .004/-0)}$
T	$\frac{0.84 \pm 0.1}{(.033 \pm .004)}$
Reel Dimensions	
A	$\frac{178 \pm 0.2}{(7.087 \pm .079)}$
B Min.	$\frac{60.0 \pm 1.0}{(2.362 \pm .039)}$
C	$\frac{13.0 \pm 1.0}{(.512 \pm .039)}$
W	$\frac{9.0 \pm 1.0}{(.354 \pm .039)}$
T	$\frac{11.4 \pm 2.0}{(.449 \pm .079)}$



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