SingIFuse™ SF-1206SP Series Features

- Time lag 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-1206SP Series - Time Lag Surface Mount Fuses

Electrical Characteristics

Model	Rated Current (Amps)	Fusing Time	Resistance (mΩ) Typ.***	Rated Voltage	Breaking Capacity	Typical I^2t (A^2s) ****
SF-1206SP050	0.50	Open within 1~120 sec. at 200 % rated current	738.5	DC 63 V	DC 63 V 50 A	0.027
SF-1206SP080	0.80		215			0.072
SF-1206SP100	1.00		163.5			0.134
SF-1206SP125	1.25		100			0.233
SF-1206SP150	1.50		68.5			0.305
SF-1206SP200	2.00		48.5			0.509
SF-1206SP250	2.50		35	DC 32 V	DC 32 V 50 A	0.777
SF-1206SP300	3.00		27			1.285
SF-1206SP400	4.00		14			2.374
SF-1206SP500	5.00		11			5.510
SF-1206SP700	7.00		7.5			10.170

*** Resistance value measured with less than 10 % of rated current. Resistance tolerance ±25 %.
****Typical I^2t 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 120 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.

SingIFuse™ SF-1206SP 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-1206SP Series - Time Lag Surface Mount Fuses

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Typical Part Marking

Represents total content. Layout may vary.

RATED CURRENT (A)

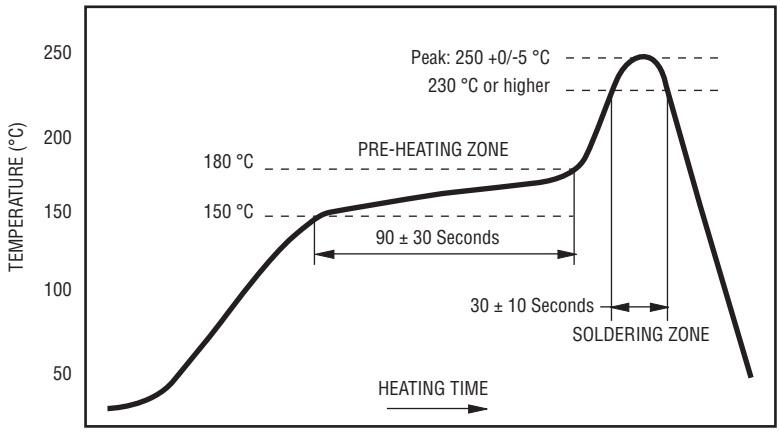
F = 0.50	T = 2.50
K = 0.80	3 = 3.00
L = 1.00	W = 4.00
M = 1.25	Y = 5.00
P = 1.50	Z = 7.00
S = 2.00	

How to Order

SF - 1206 SP 050 - 2

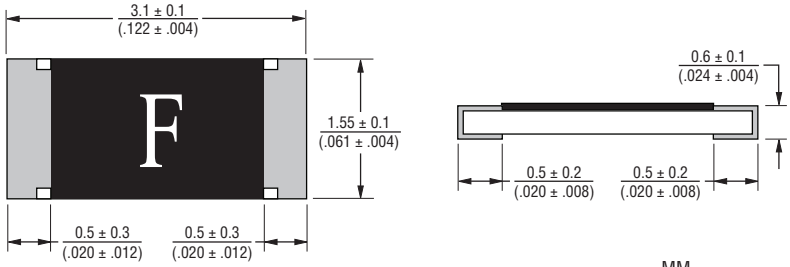
- SingIFuse™ Product Designator
- SMD Footprint
  3216 (EIA 1206) size
- Fuse Blow Type
  SP = Time Lag
- Rated Current
  050-700 (500 mA - 7.00 A)
- Packaging Type
  - 2 = Tape & Reel (5,000 pcs./reel)

Solder Reflow Recommendations



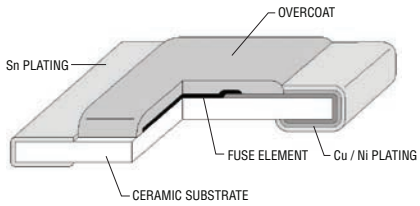
PEAK: 250 +0/-5 °C, 5 seconds
PRE-HEATING ZONE: 150 to 180 °C, 90 ± 30 seconds
SOLDERING ZONE: 230 °C or higher, 30 ± 10 seconds

Product Dimensions



DIMENSIONS: MM / (INCHES)

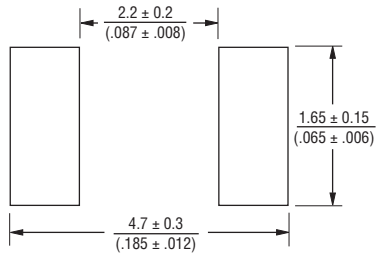
Construction & Material Content



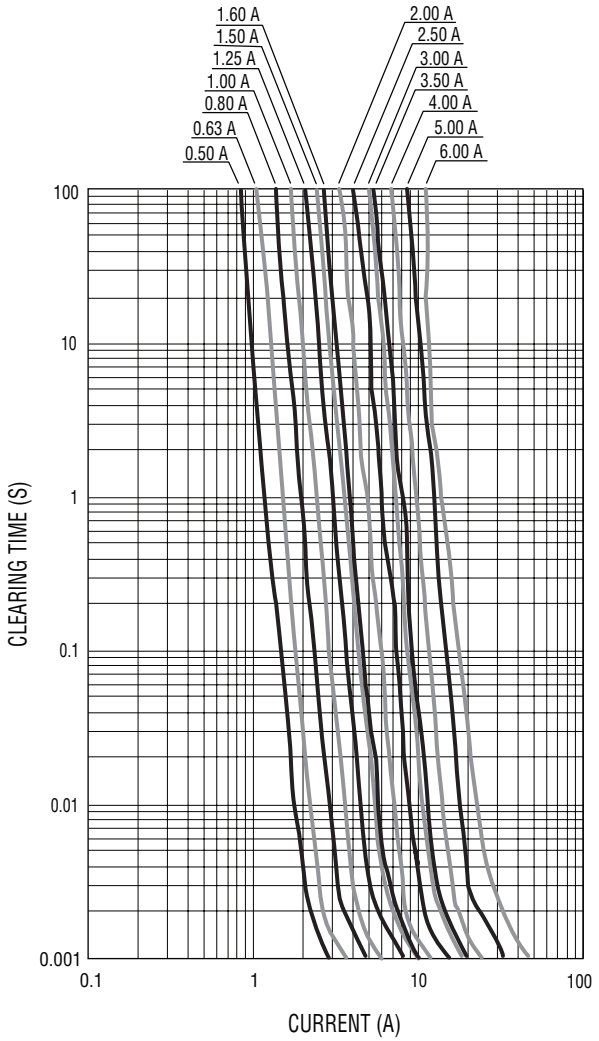
Packaging Quantity

5,000 pieces per 7-inch reel

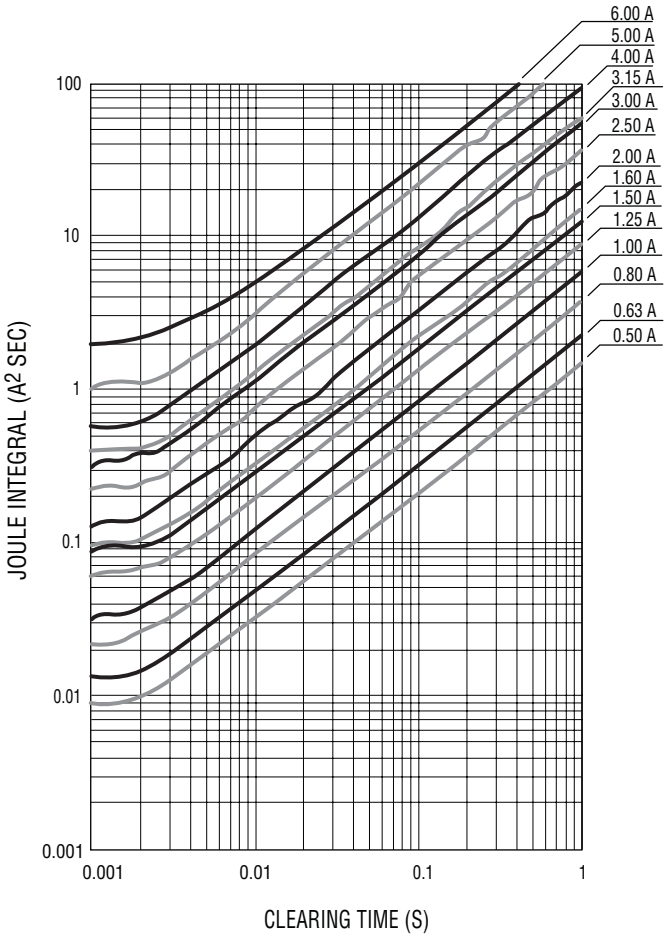
Recommended Pad Layout



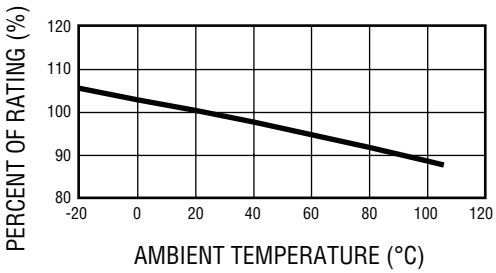
Average Time Current Curves



Minimum I^2T V Clear Time Curves



Thermal Derating Curve



REV. D 01/19

SF-1206SP Series Tape and Reel Specifications

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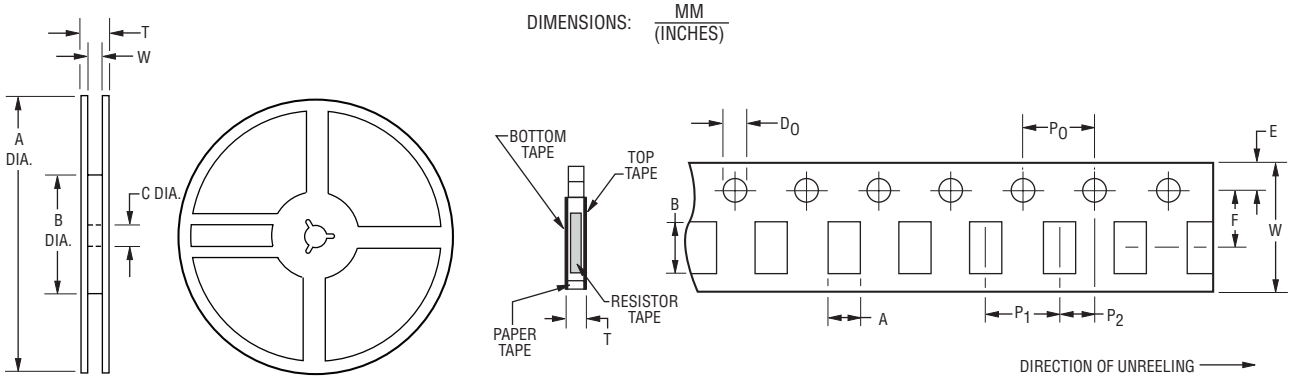
Tape Dimensions	SF-1206SP Series per EIA 481-2
W	8.0 ± 0.2 (.315 ± .008)
P_0	4.0 ± 0.1 (.157 ± .004)
P_1	4.0 ± 0.1 (.157 ± .004)
P_2	2.0 ± 0.05 (.079 ± .002)
A	2.0 ± 0.15 (.079 ± .006)
B	3.6 ± 0.2 (.142 ± .008)
F	3.5 ± 0.05 (.138 ± .002)
E	1.75 ± 0.1 (.069 ± .004)
D_0	1.5 + 0.1/-0 (.059 + .004/-0)
T	0.84 ± 0.1 (.033 ± .004)
Reel Dimensions	
A	178 ± 0.2 (7.087 ± .079)
B Min.	60.0 ± 1.0 (2.362 ± .039)
C	13.0 ± 1.0 (.512 ± .039)
W	9.0 ± 1.0 (.354 ± .039)
T	11.4 ± 2.0 (.449 ± .079)



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