



SinglFuse™ SF-2410SPxxxW Series Features

- Single blow fuse for overcurrent protection
- 6125 (EIA 2410) footprint
- Time lag fuse
- UL 248-14 listed
- RoHS compliant* and halogen free**
- Wire core SMD design
- Surface mount packaging for automated assembly
- High AC power one-time protection fuse

SF-2410SPxxxW Series - Time Lag Wire Core Surface Mount Fuses

Electrical Characteristics

Model	Rated Current (Amps)	Fusing Time	Resistance (Ω) Typ.***	Rated Voltage	Interrupting Rating	Voltage Drop Max. (mV)	Typical I ² t (A ² s) ****
SF-2410SP050W-2	0.50	Open within 120 sec. at 200 % rated current	0.206	AC 250 V	AC 250 V 100 A DC 125 V 50 A	166	0.11
SF-2410SP063W-2	0.63		0.148			144	0.20
SF-2410SP080W-2	0.80		0.109			139	0.35
SF-2410SP100W-2	1.00		0.084			129	0.62
SF-2410SP125W-2	1.25		0.065			128	1.00
SF-2410SP160W-2	1.60		0.049			127	1.80
SF-2410SP200W-2	2.00		0.038			123	3.00

*** Resistance value measured with ≤10 % rated current at 25 °C ambient. Tolerance ±25 %.

**** Melting I²t calculated at 0.001 second pre-arcing time.

Reliability Testing

No.	Test	Requirement	Test Condition	Test Reference
1	Reflow and bend	DCR change ≤ 20 % (≤ 10 % for ≤1 A) No mechanical damage	3 reflows at 245 °C followed by a 2 mm bend	Refer to STP document
2	Solderability	Minimum 90 % coverage	One dip at 245 °C for 5 seconds	MIL-STD-202 Method 208
3	Soldering heat resistance	DCR change ≤ 20 % (≤ 10 % for ≤1 A) New solder coverage ≤ 75 %	One dip at 260 °C for 10 seconds	MIL-STD-202 Method 210
4	Moisture resistance	DCR change ≤ ±15 % No excessive corrosion	10 cycles	MIL-STD-202 Method 106
5	Salt spray	DCR change ≤ ±10 % No excessive corrosion	48 hour exposure, 5 % salt solution	MIL-STD-202 Method 101
6	Mechanical vibration	DCR change ≤ ±10 % No mechanical damage	0.4 inch D.A. or 30 G between 5-3000 Hz	MIL-STD-202 Method 204
7	Mechanical shock	DCR change ≤ ±10 % No mechanical damage	1500 G, 0.5 ms, half-sine shocks	MIL-STD-202 Method 213
8	Thermal Shock	DCR change ≤ ±10 % No mechanical damage	100 cycles between -65 °C and +125 °C	MIL-STD-202 Method 107
9	Life	No electrical "opens" during testing Voltage drop change shall be less than ±20 % of initial value	80 % rated current (75 % for < 1 A fuses) for 2000 hours at ambient temperature +25 °C	Refer to STP document

Agency Recognition

UL File Number E198545

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* 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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Users should verify actual device performance in their specific applications.

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WARNING Cancer and Reproductive Harm

www.P65Warnings.ca.gov

SinglFuse™ SF-2410SPxxxW Series Applications

- White goods
- Lighting ballasts
- LED drivers
- Medical equipment (excluding critical life support)
- DC/DC converters
- Power chargers
- Power adapters
- Industrial equipment

SF-2410SPxxxW Series - Time Lag Wire Core Surface Mount Fuses

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Environmental Characteristics

Operating Temperature.....	-55 °C to +125 °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

Typical Part Marking

Represents total content. Layout may vary.



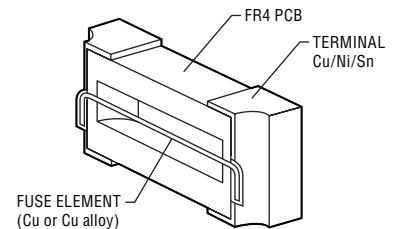
RATED CURRENT (A)
 C = 0.50 F = 1.25
 S = 0.63 T = 1.60
 H = 0.80 I = 2.00
 E = 1.00

How to Order

SF - 2410 SP 100 W - 2

SinglFuse™
 Product Designator
 SMD Footprint
 2410 = 6125 (EIA 2410) size
 Fuse Blow Type
 SP = Time Lag
 Rated Current
 050 ~ 200 (0.5 A ~ 2.0 A)
 Structure Type
 W = Wire Core
 Packaging Type
 - 2 = Tape & Reel

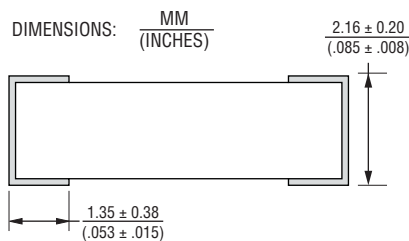
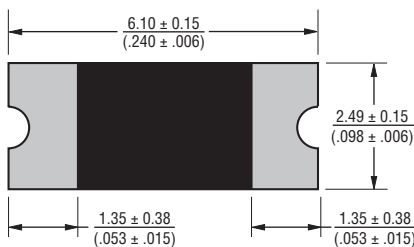
Construction



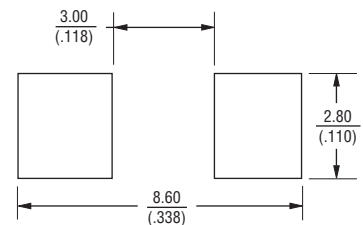
Packaging Quantity

2,000 pieces per 7-inch reel

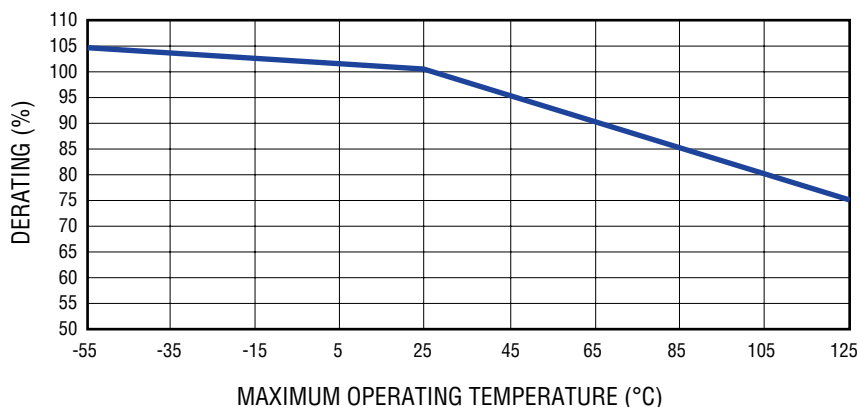
Product Dimensions



Recommended Pad Layout



Current Rating Thermal Derating Curve

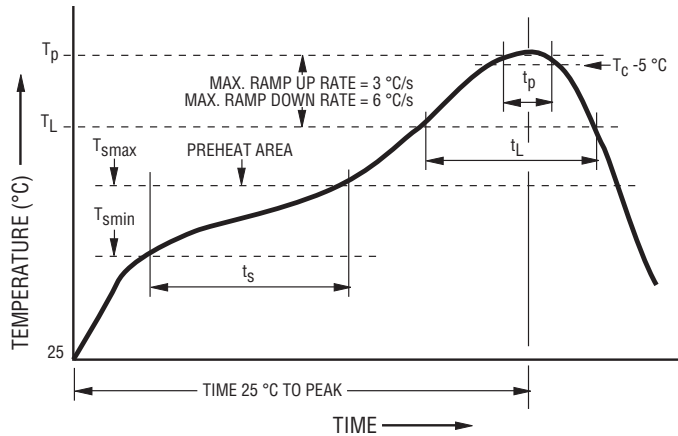


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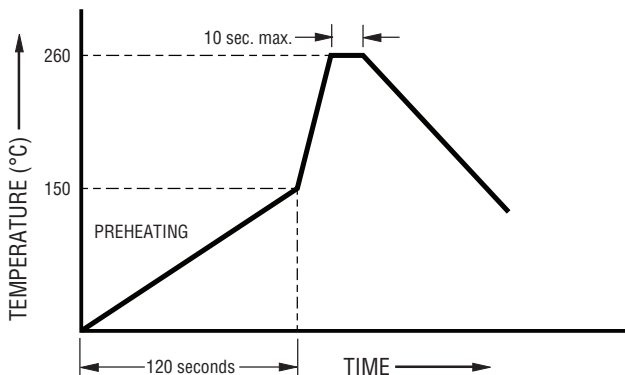
Solder Reflow Recommendations



Profile Feature	Pb-Free Assembly
Preheat / Soak:	
Temperature Min. (T_{smin})	150 °C
Temperature Max. (T_{smax})	200 °C
Time (t_s) from (T_{smin} to T_{smax})	60~120 seconds
Ramp Up Rate (T_L to T_p)	3 °C / second max.
Liquidous Temperature (T_L)	217 °C
Time (t_L) maintained above T_L	60~150 seconds
Peak Package Body Temperature (T_p)	260 °C
Time (t_p)* within 5 °C of the specified classification temperature (T_C)	30 seconds*
Ramp Down Rate (T_p to T_L)	6 °C / second max.
Time 25 °C to Peak Temperature	8 minutes max.

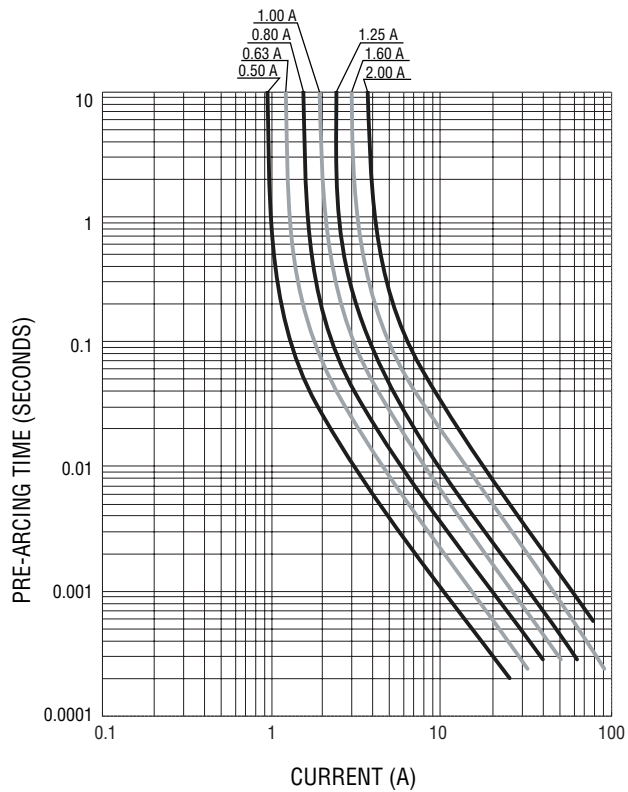
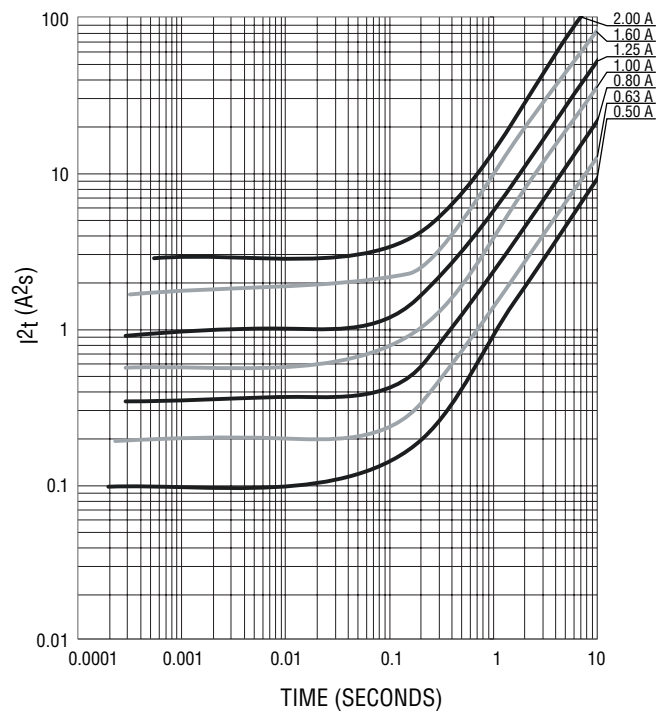
* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

Recommended Temperature Profile for Wave Soldering



Wave soldering is suitable for 2410 size models.

Average Pre-Arcing Time vs. Current Curves

Average I^2t vs. t Curves

SF-2410SPxxxW Series Tape and Reel Packaging Specifications

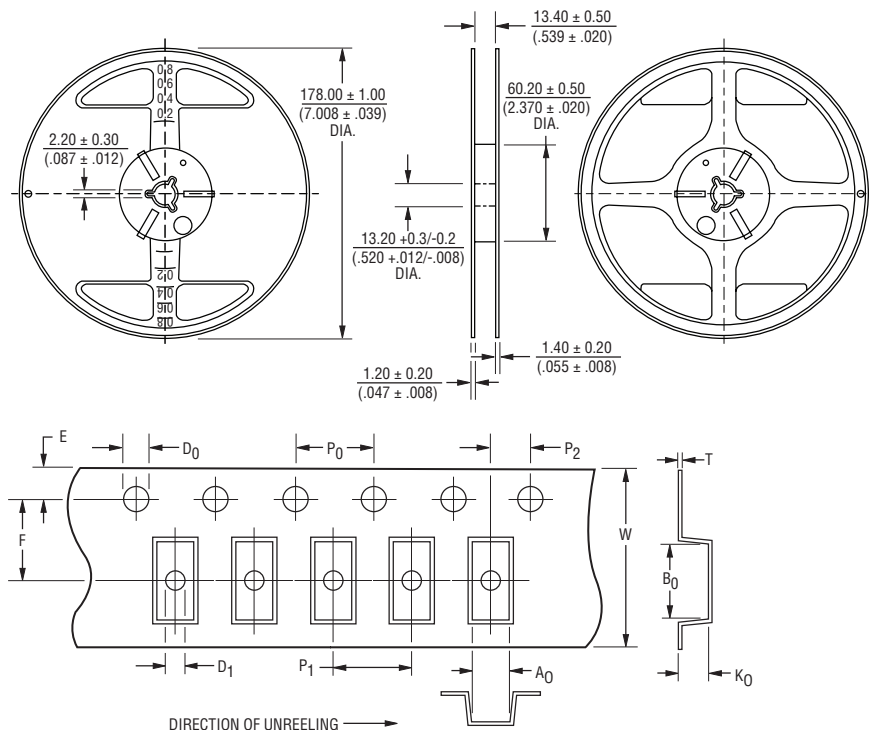
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SF-2410SPxxxW Series per EIA 481-2

Tape Dimensions

W	$\frac{12.00 \pm 0.10}{(.48 \pm .004)}$
P ₀	$\frac{4.0 \pm 0.10}{(.157 \pm .004)}$
P ₁	$\frac{4.0 \pm 0.10}{(.157 \pm .004)}$
P ₂	$\frac{2.0 \pm 0.05}{(.079 \pm .002)}$
A ₀	$\frac{2.85 \pm 0.10}{(.114 \pm .004)}$
B ₀	$\frac{6.40 \pm 0.10}{(.256 \pm .004)}$
F	$\frac{5.50 \pm 0.10}{(.220 \pm .004)}$
E	$\frac{1.75 \pm 0.10}{(.069 \pm .004)}$
D ₀	$\frac{1.55 \pm 0.10}{(.059 \pm .004)}$
D ₁	$\frac{1.55 \pm 0.10}{(.059 \pm .004)}$
K ₀	$\frac{2.35 \pm 0.10}{(.094 \pm .004)}$
T	$\frac{0.25 \pm 0.05}{(.010 \pm .002)}$

PACKAGING: Plastic tape, 2,000 pcs. per reel



DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

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