



SinglFuse™ SF-2410FPxxxW Series Features

- Single blow fuse for overcurrent protection
- 6125 (EIA 2410) footprint
- Fast acting precision
- UL 248-14 listed
- RoHS compliant* and halogen free**
- Wire core SMD design
- Surface mount packaging for automated assembly

SF-2410FPxxxW Series - Fast Acting Precision Wire Core Surface Mount Fuses

Electrical Characteristics

Model	Rated Current (Amps)	Fusing Time	Resistance (Ω) Typ.***	Rated Voltage	Interrupting Rating	Typical I ² t (A ² s) ****
SF-2410FP050W-2	0.50	Open within 5 sec. at 200 % rated current	0.231	AC 250 V DC 125 V	AC 250 V 100 A DC 125 V 50 A DC 32 V 300 A	0.10
SF-2410FP063W-2	0.63		0.174			0.16
SF-2410FP075W-2	0.75		0.148			0.23
SF-2410FP100W-2	1.00		0.093			0.59
SF-2410FP125W-2	1.25		0.070			0.96
SF-2410FP150W-2	1.50		0.062			1.19
SF-2410FP200W-2	2.00		0.042			2.75
SF-2410FP250W-2	2.50		0.031	1.21		
SF-2410FP300W-2	3.00		0.0249	1.73		
SF-2410FP315W-2	3.15		0.0232	2.20		
SF-2410FP350W-2	3.50		0.022	2.50		
SF-2410FP400W-2	4.00		0.0172	4.10		
SF-2410FP500W-2	5.00		0.0143	5.90		
SF-2410FP630W-2	6.30		0.010	12.50		
SF-2410FP700W-2	7.00		0.0094	14.20		
SF-2410FP800W-2	8.00		0.0086	20.30		
SF-2410FP1000W-2	10.00		0.0066	29.20		

*** 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



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.

"SinglFuse" is a trademark of Bourns, Inc.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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SingIFuse™ SF-2410FPxxxW Series Applications

- LCD / LED TVs
- White goods
- PC servers
- LCD monitors
- DC/DC converters
- DC/AC inverters
- Notebooks / ultrabooks
- Telecom systems
- Chargers

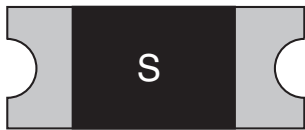
SF-2410FPxxxW Series - Fast Acting Precision Wire Core Surface Mount Fuses **BOURNS®**

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.



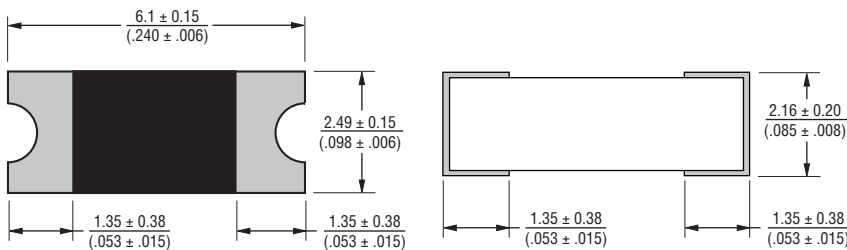
RATED CURRENT (A)	
C = 0.50	K = 3.00
S = 0.63	V = 3.15
D = 0.75	L = 3.50
E = 1.00	M = 4.00
F = 1.25	N = 5.00
G = 1.50	O = 6.30
I = 2.00	P = 7.00
J = 2.50	R = 8.00
	Q = 10.0

How to Order

SF - 2410 FP 100 W - 2

SingIFuse™
 Product Designator
 SMD Footprint
 2410 = 6125 (EIA 2410) size
 Fuse Blow Type
 FP = Fast Acting Precision
 Rated Current
 050 ~ 1000 (0.50 A ~ 10.00 A)
 Structure Type
 W = Wire Core
 Packaging Type
 - 2 = Tape & Reel

Product Dimensions

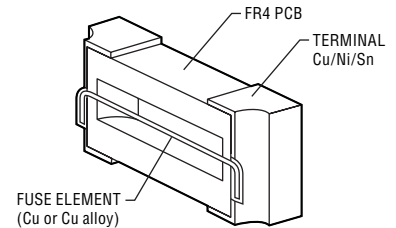


DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Agency Recognition

UL File Number E198545

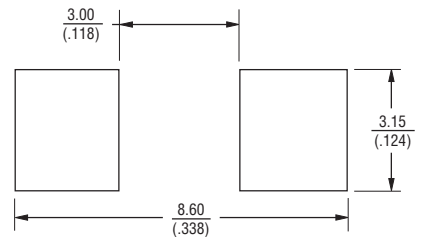
Construction



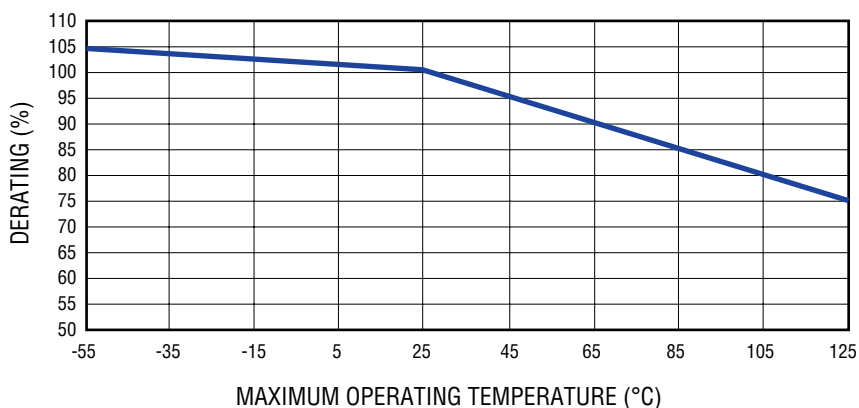
Packaging Quantity

2,000 pieces per 7-inch reel

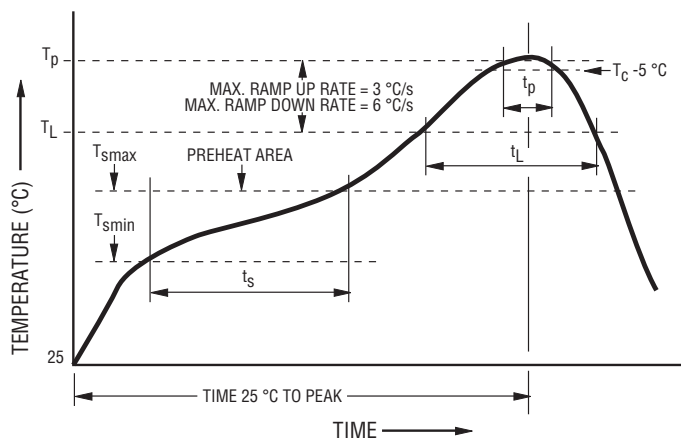
Recommended Pad Layout



Current Rating Thermal Derating Curve



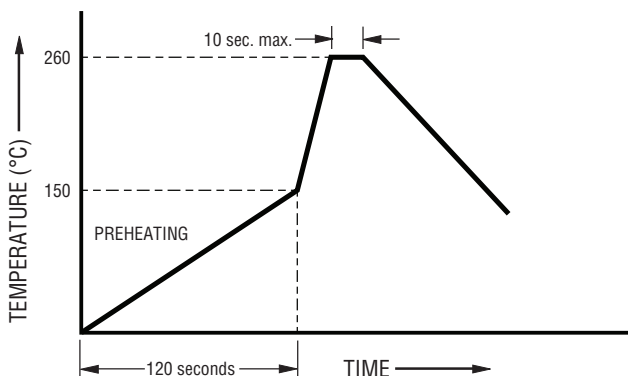
Solder Reflow Recommendations



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.

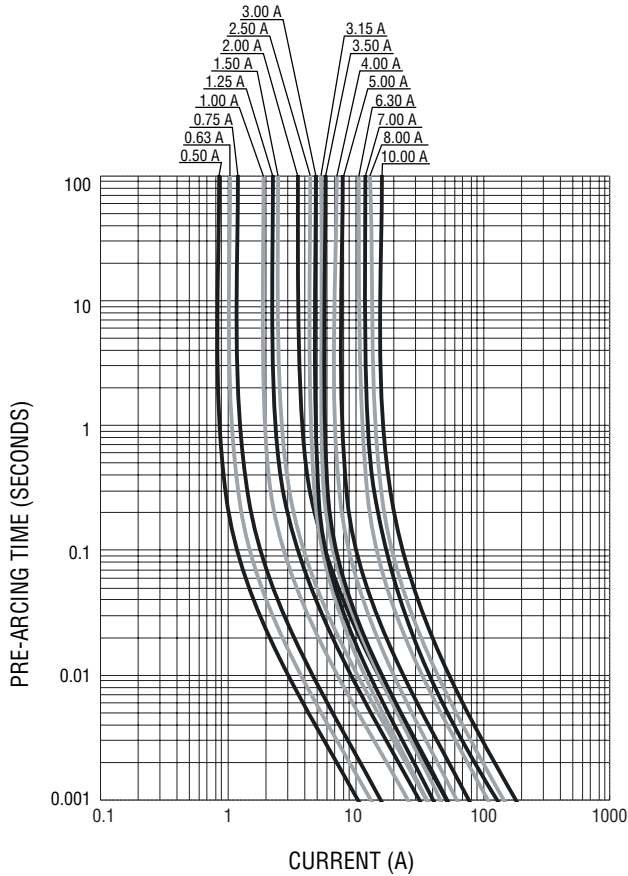
* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

Recommended Temperature Profile for Wave Soldering

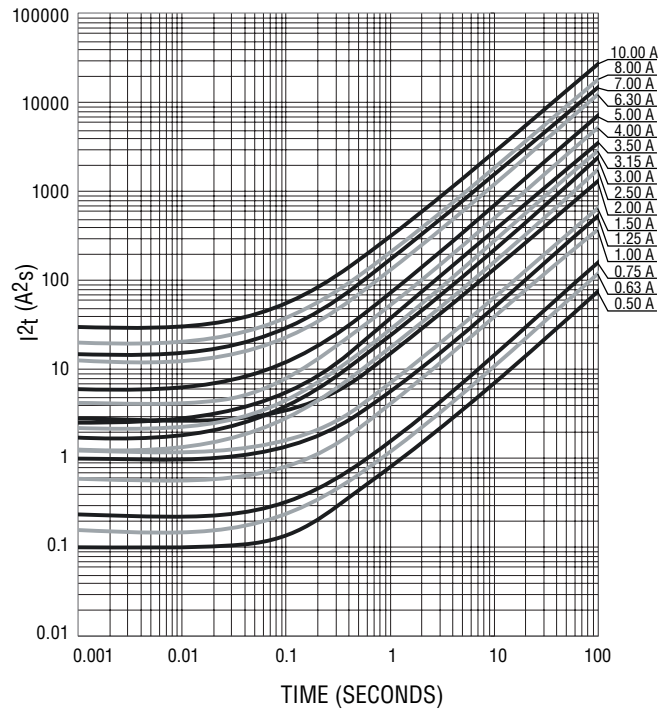


Wave soldering is suitable for 2410 size models.

Average Pre-Arcing Time vs. Current Curves



Average I^2t vs. t Curves



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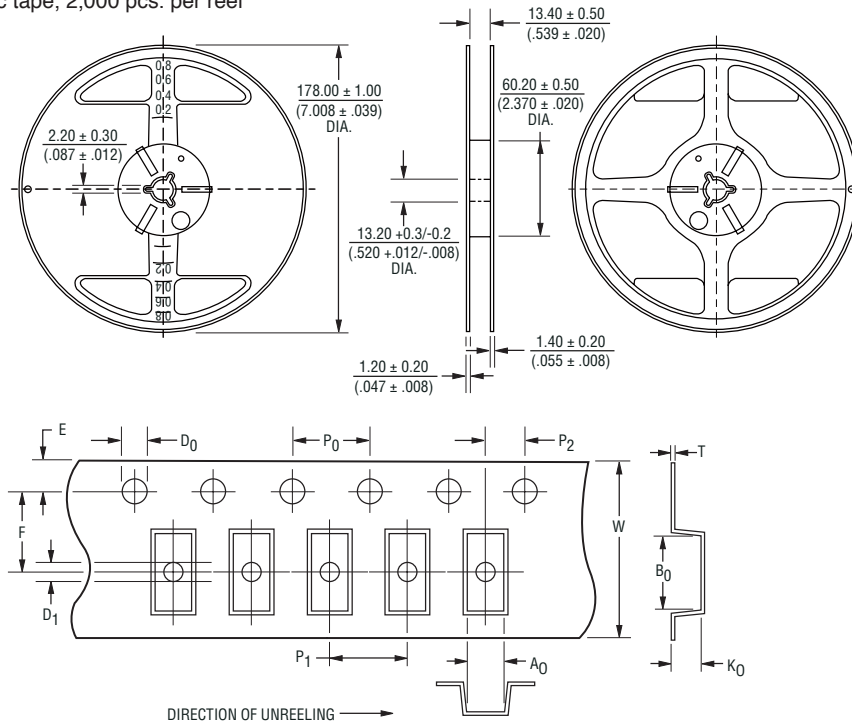
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SF-2410FPxxxW Series
per EIA 481-2

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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