

SingIFuse™ SF-2410FP-W Series Features

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

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

Clearing Time Characteristics for Series

% of Current Rating	Clearing Time at 25 °C	
	Min.	Max.
100 %	4 hours	—
200 %	0.01 seconds	5 seconds

Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Electrical Characteristics

Model	Rated Current (A)	Resistance (Ω) Typ.***	Rated Voltage	Interrupting Rating	Typical I^2t (A^2s) ****	Certifications	
						cUL: E198545	TUV R 50432918
SF-2410FP050W-2	0.50	0.230	250 VAC 125 VDC	100 A @ 250 VAC 50 A @ 125 VDC	0.101	✓	✓
SF-2410FP063W-2	0.63	0.173			0.162	✓	✓
SF-2410FP075W-2	0.75	0.147			0.232	✓	
SF-2410FP100W-2	1.00	0.0925			0.596	✓	✓
SF-2410FP125W-2	1.25	0.0697			0.970	✓	✓
SF-2410FP150W-2	1.50	0.0617			1.202	✓	
SF-2410FP200W-2	2.00	0.0418			2.778	✓	✓
SF-2410FP250W-2	2.50	0.0308	125 VAC 125 VDC	50 A @ 125 VAC 50 A @ 125 VDC	1.222	✓	
SF-2410FP300W-2	3.00	0.0248			1.747	✓	
SF-2410FP315W-2	3.15	0.0231			2.22	✓	
SF-2410FP350W-2	3.50	0.0219			2.53	✓	
SF-2410FP400W-2	4.00	0.0171			4.14	✓	
SF-2410FP500W-2	5.00	0.0143			5.96	✓	
SF-2410FP630W-2	6.30	0.0100			12.63	✓	
SF-2410FP700W-2	7.00	0.0094			14.34	✓	
SF-2410FP800W-2	8.00	0.0086			20.50	✓	
SF-2410FP1000W-2	10.00	0.0066		35 A @ 125 VAC 50 A @ 125 VDC 300 A @ 32 VDC	29.49	✓	

*** Resistance value measured with ≤10 % rated current at 25 °C ambient. Tolerance ±25 %.
**** Melting I^2t calculated at 0.001 second pre-arcing time.

WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
**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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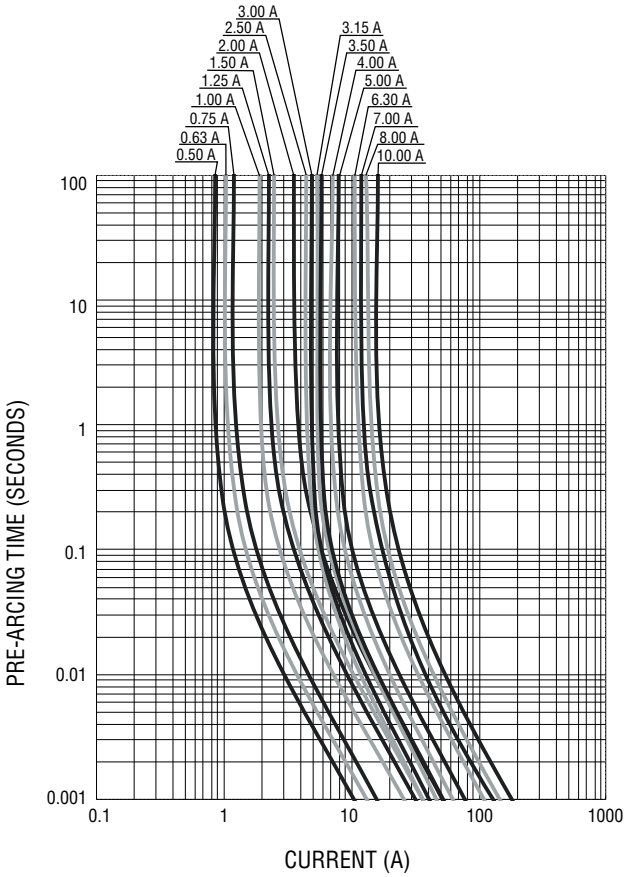
SingIFuse™ SF-2410FP-W Series Applications

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

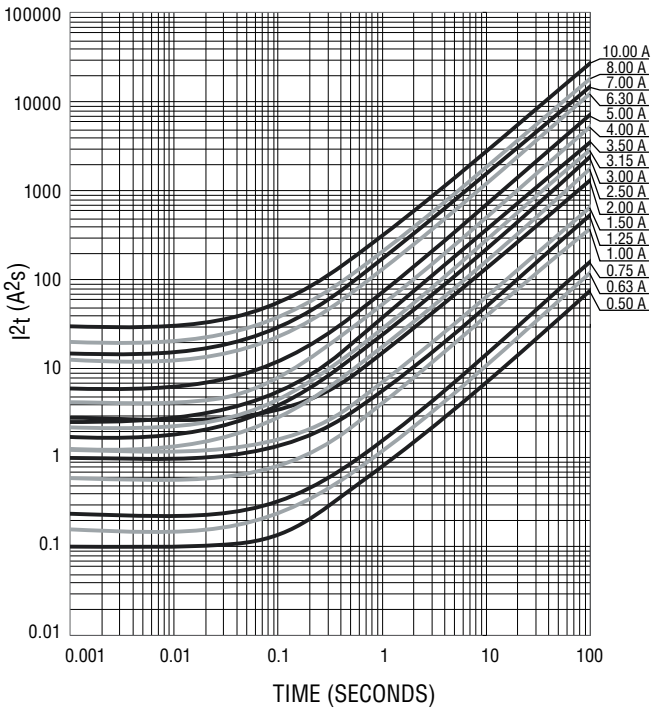
SF-2410FP-W Series – Fast Acting Precision Wire Core Surface Mount Fuses

BOURNS®

Average Pre-Arcing Time vs. Current Curves



Average I²t vs. t Curves



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

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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

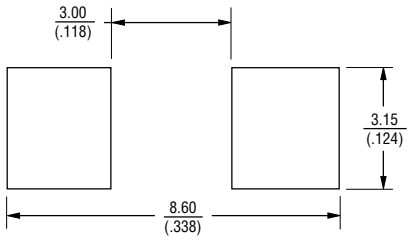
SF - 2410 FP 100 W - 2

- SinglFuse™ 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

Packaging

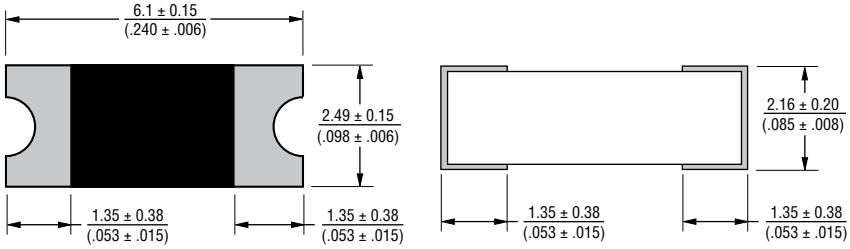
Reel Dimension	7-inch Tape and Reel
Specification	EIA 481-2
Quantity	2,000 pieces
Packaging Code	-2

Recommended Pad Layout



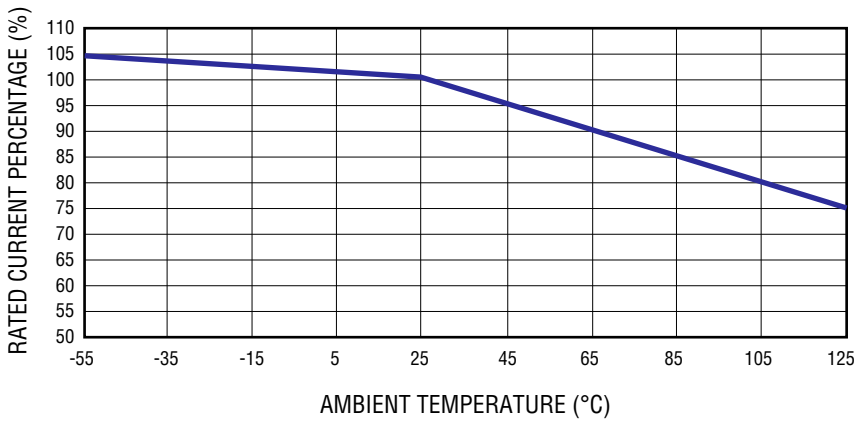
DIMENSIONS: MM / (INCHES)

Product Dimensions



DIMENSIONS: MM / (INCHES)

Current Rating Thermal Derating Curve



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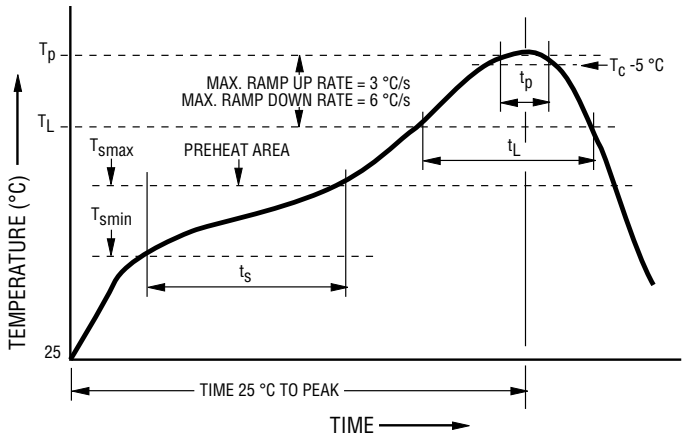
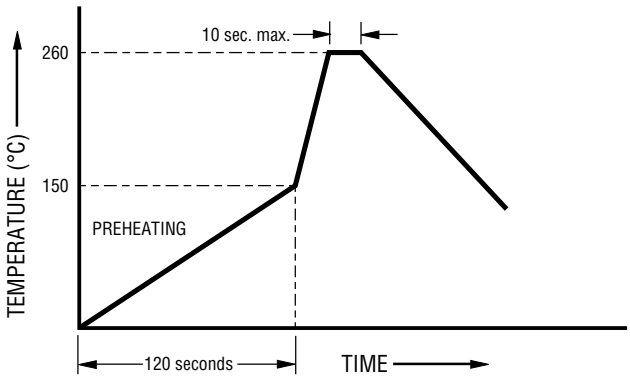
Solder Reflow Recommendations



Profile Feature	Pb-Free Assembly
Preheat / Soak: Temperature Min. (T_{smin}) Temperature Max. (T_{smax}) Time (t_s) from (T_{smin} to T_{smax})	 150 °C 200 °C 60~120 seconds
Ramp Up Rate (T_L to T_p)	3 °C / second max.
Liquidous Temperature (T_L) Time (t_L) maintained above T_L	217 °C 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 (Tp) is defined as a supplier minimum and a user maximum.

Recommended Temperature Profile for Wave Soldering



Wave soldering is suitable for 2410 size models.

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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

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