THE DATASHEET OF

SF-2410FPA200W-2

Features

- Fast acting precision fusing speed
- EIA 2410 (6125 metric) footprint
- AEC-Q200 compliant*
- UL 248-14 listed
- RoHS compliant** and halogen free***

SF-2410FPA-W Series - Automotive Grade Fast Acting Precision Fuses

Clearing Time Characteristics for Series

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

Additional Information

Click these links for more information:

PRODUCT | TECHNICAL LIBRARY | INVENTORY | SAMPLES

Electrical Characteristics

Model	Rated Current (A)	Resistance (Ω) Typ.*****	Rated Voltage	Interrupting Rating	Typical I^2t (A^2s) ******	Certifications
						cUL: E198545
SF-2410FPA100W-2	1	0.093	250 VDC	100 A @ 250 VDC 300 A @ 32 VDC	0.59	✓
SF-2410FPA125W-2	1.25	0.07			0.96	✓
SF-2410FPA150W-2	1.5	0.06			1.19	✓
SF-2410FPA200W-2	2	0.042			2.75	✓
SF-2410FPA250W-2	2.5	0.031	125 VDC	50 A @ 125 VDC 300 A @ 32 VDC	1.21	✓
SF-2410FPA300W-2	3	0.0249			1.73	✓
SF-2410FPA315W-2	3.15	0.023			2.2	✓
SF-2410FPA350W-2	3.5	0.021			2.5	✓
SF-2410FPA400W-2	4	0.0175			3.3	✓
SF-2410FPA500W-2	5	0.0146			5.9	✓
SF-2410FPA630W-2	6.3	0.01			12.5	✓
SF-2410FPA700W-2	7	0.0097			14.2	✓
SF-2410FPA800W-2	8	0.0085			16.5	✓
SF-2410FPA1000W-2	10	0.0068			29.2	✓

***** 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

* Meets Bourns' internal AEC-Q200 equivalent test plan.
** 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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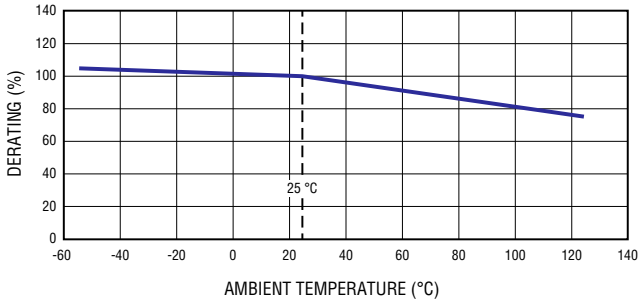
Environmental Characteristics

Operating Temperature	-55 °C to + 125 °C
Storage Conditions	
Temperature	+5 °C to +35 °C
Humidity	40 % to 75 %
Moisture Sensitivity Level	1
ESD Classification[1]	Class 6

[1]per AEC-Q200-2, HBM

Current Rating Thermal Derating Curve



Typical Part Marking

Represents total content. Layout may vary. Markings in blue color.

Rated Current	Part Marking	Rated Current	Part Marking
1 A	E	3.5 A	L
1.25 A	F	4 A	M
1.5 A	G	5 A	N
2 A	I	6.3 A	O
2.5 A	J	7 A	P
3 A	K	8 A	R
3.15 A	V	10 A	Q

How to Order

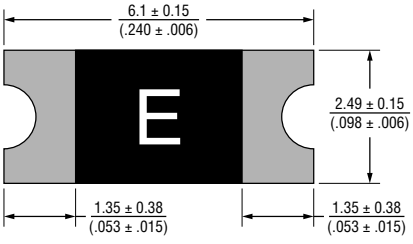
SF - 2410 FP A 100 W - 2

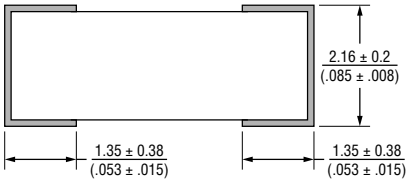
- SinglFuse™ Product Designator
- SMD Footprint
  - 2410 = EIA 2410 (6125 metric)
- Fuse Blow Type
  - FP = Fast Acting Precision
- Automotive Grade
- Rated Current
  - 100 ~ 1000 = 1 A ~ 10 A
- Structure Type
  - W = Wire Core
- Packaging Type
  - - 2 = Tape & Reel

Packaging

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

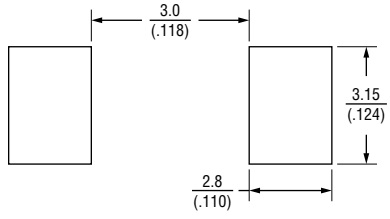
Product Dimensions





DIMENSIONS: MM (INCHES)

Recommended Pad Layout



DIMENSIONS: MM (INCHES)

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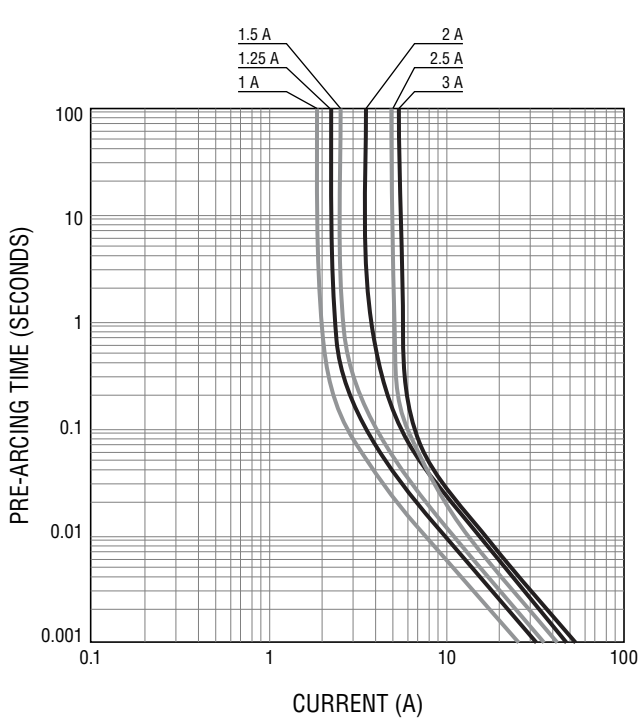
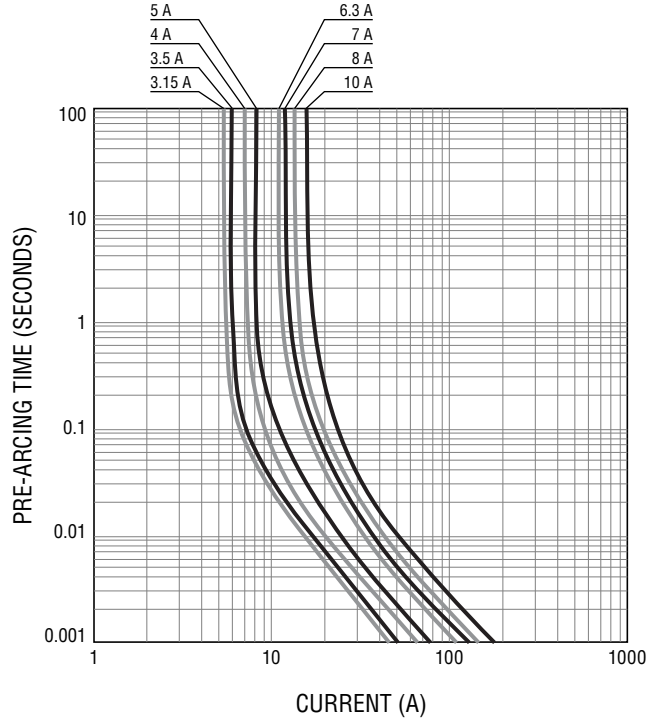
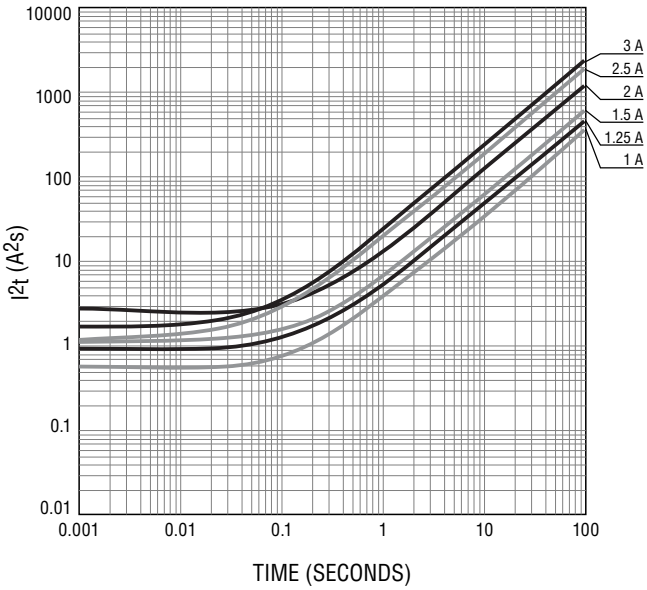
Average Pre-Arcing Time vs. Current Curves (1 - 3 A)



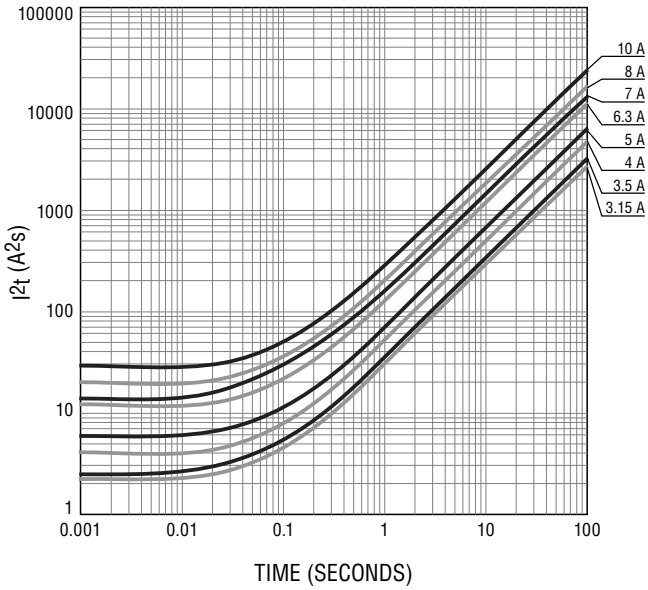
Average Pre-Arcing Time vs. Current Curves (3.15 - 10 A)



Average I^2t vs. t Curves (1 - 3 A)



Average I^2t vs. t Curves (3.15 - 10 A)



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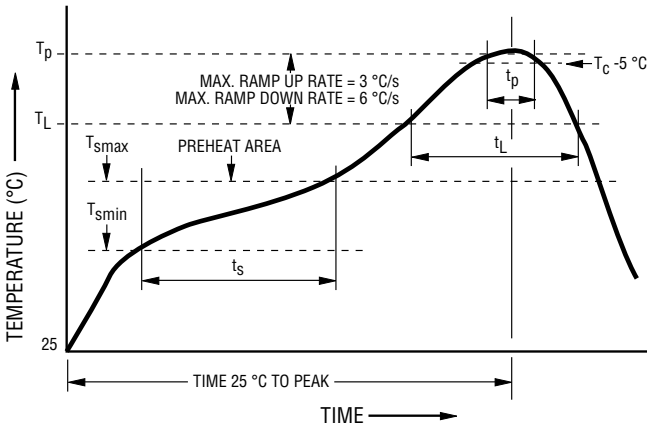
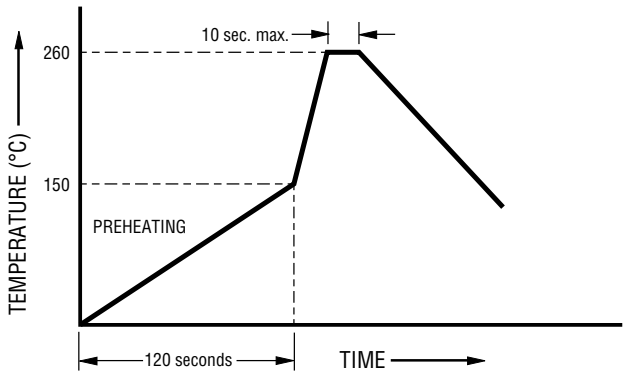
Solder Reflow Recommendations



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.

Solder Wave Recommendations



Reliability Tests

Test Items	Reference Standard
Visual Inspection	MIL-STD-883 Method 2009
High Temperature Storage	MIL-STD-202 Method 108
Low Temperature Storage	IEC 60068-2-1
Temperature Cycling	JESD22 Method JA-104
Biased Humidity	MIL-STD-202 Method 103
High Temperature Operating Life	MIL-STD-202 Method 108
Physical Dimension	JESD22 Method JB-100
Mechanical Vibration	MIL-STD-202 Method 204
Mechanical Shock	MIL-STD-202 Method 213
Resistance to Soldering Heat	MIL-STD-202 Method 210
Salt Spray	MIL-STD-202 Method 101
Solderability	MIL-STD-202 Method 208
Terminal Strength	AEC-Q200-006
Board Flex	AEC-Q200-005
Electrical Characterization	Bourns Specification

BOURNS®

Asia-Pacific:
Tel: +886-2 2562-4117 • Email: asiacus@bourns.com
Europe:
Tel: +36 88 885 877 • Email: eurocus@bourns.com
The Americas:
Tel: +1-951 781-5500 • Email: americus@bourns.com
www.bourns.com

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