

Features

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

SF-2410FA-W Series - Automotive Grade Fast Acting SMD Fuses

Clearing Time Characteristics for Series

% of Current Rating	Clearing Time @ 25 °C	
	Min.	Max.
100 %	4 hours	—
200 %	0.01 second	20 seconds

Additional Information

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Electrical Characteristics

Model	Rated Current (A)	Resistance (Ω) Typ.*****	Rated Voltage	Interrupting Rating	Typical I ² t (A ² s)*****	Certifications
						cUL: E198545
SF-2410FA1200W-2	12	0.0053	65 VDC	50 A @ 65 VDC 300 A @ 32 VDC	39.3	✓
SF-2410FA1500W-2	15	0.0037			102.5	✓
SF-2410FA2000W-2	20	0.0029		100 A @ 65 VDC 300 A @ 32 VDC	126.2	✓

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

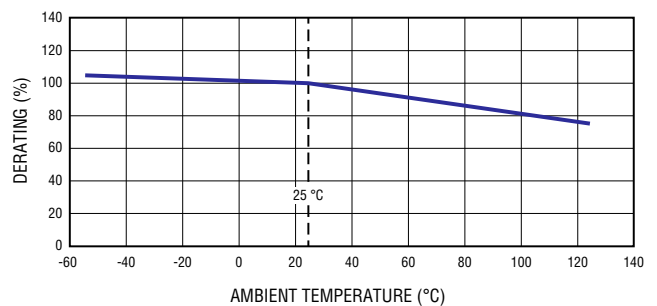
***** Melting I²t calculated at 0.001 second pre-arcing time.

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

¹per AEC-Q200-2, HBM

Current Rating Thermal Derating Curve



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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Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

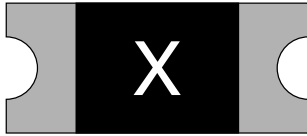
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SF-2410FA-W Series – Automotive Grade Fast Acting SMD Fuses



Typical Part Marking

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



Rated Current	Part Marking
12 A	X
15 A	Y
20 A	Z

How to Order

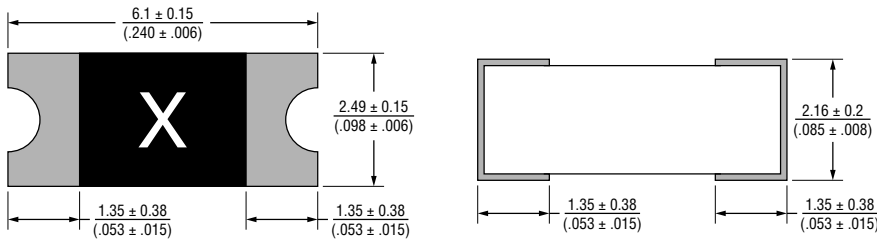
SF - 2410 F A 1200 W - 2

SingIFuse™ _____
 Product Designator _____
 SMD Footprint _____
 2410 = EIA 2410
 (6125 metric) _____
 Fuse Blow Type _____
 F = Fast Acting _____
 Automotive Grade _____
 Rated Current _____
 1200 ~ 2000 = 12 A ~ 20 A _____
 Structure Type _____
 W = Wire Core _____
 Packaging Type _____
 - 2 = Tape & Reel _____

Packaging

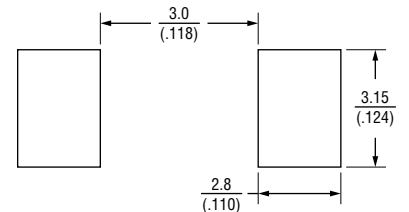
Reel Dimension	7-inch Tape and Reel
Specification	EIA 481-2
Quantity	2,000 pieces
Packaging Code	-2

Product Dimensions



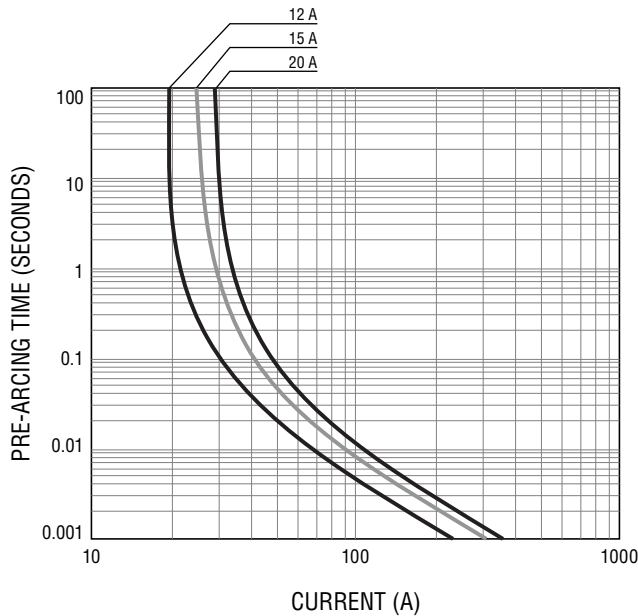
DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Recommended Pad Layout

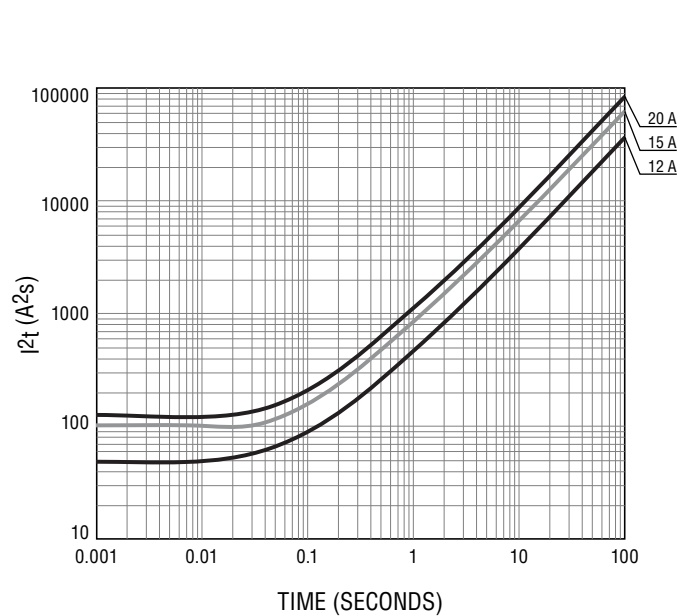


DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Average Pre-Arcing Time vs. Current Curves



Average I^2t vs. t Curves

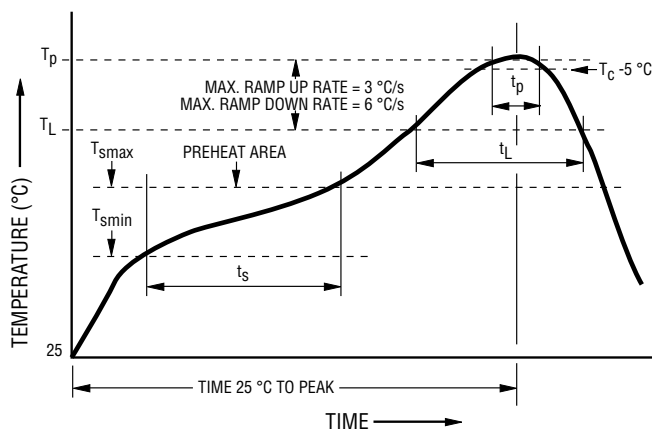


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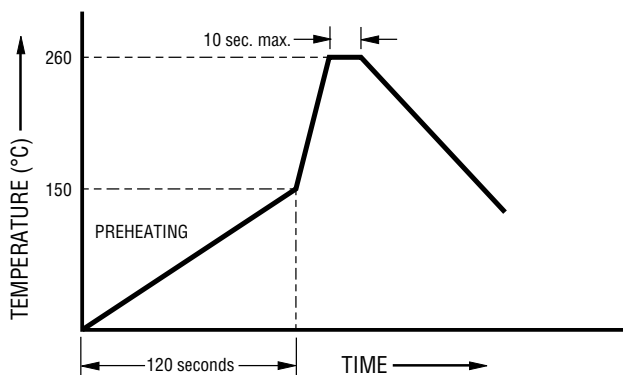
Solder Reflow Recommendations



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 (T_p) 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



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