

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number:	SF-2410SP125W-2
Manufacturer:	Bourns Inc.
Package:	Tape & Reel (TR), Cut Tape (CT), Digi-Reel®
Availability:	Please confirm with sales

Product Page:

<https://antrexco.com/product/details/bourns-inc/sf-2410sp125w-2.html>

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Quality & Trust

New & Original Components

Supplier verification and packaging condition review

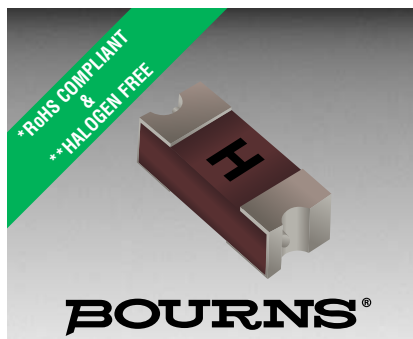
CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.



SinglFuse™ SF-2410SP-W Series Features

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

SF-2410SP-W Series - Time Lag Wire Core Surface Mount Fuses

Clearing Time Characteristics for Series

% of Current Rating	Clearing Time at 25 °C	
	Min.	Max.
100 %	4 hours	—
125 %	1 hour	—
200 %	—	120 seconds
1000 %	0.001 seconds	0.01 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	VDE: 40049803
SF-2410SP050W-2	0.50	0.206	250 VAC	100 A @ 250 VAC	0.11	✓	✓
SF-2410SP063W-2	0.63	0.148			0.20	✓	✓
SF-2410SP080W-2	0.80	0.109			0.35	✓	✓
SF-2410SP100W-2	1.00	0.084			0.62	✓	✓
SF-2410SP125W-2	1.25	0.065			1.00	✓	✓
SF-2410SP160W-2	1.60	0.049			1.80	✓	✓
SF-2410SP200W-2	2.00	0.038			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.

BOURNS®

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*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.

"SinglFuse" is a trademark of Bourns, Inc.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.



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

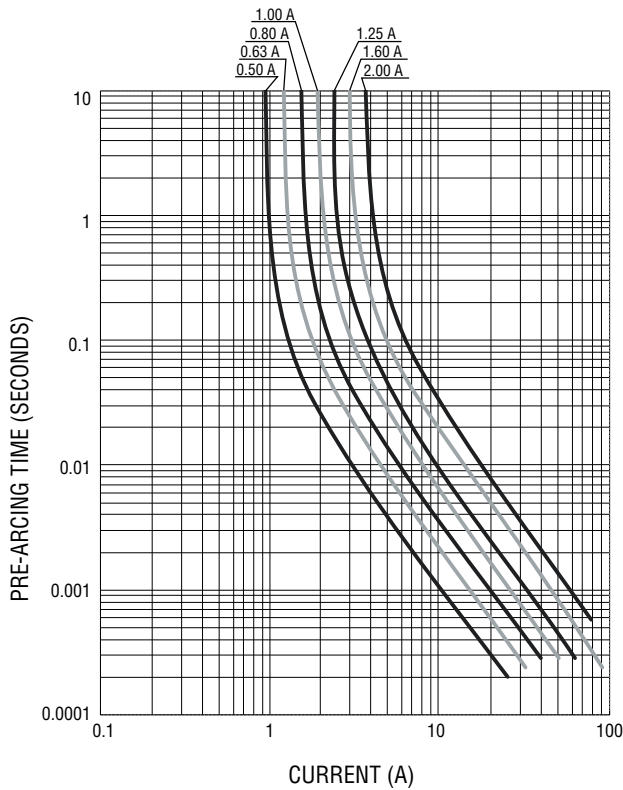
SinglFuse™ SF-2410SP-W Series Applications

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

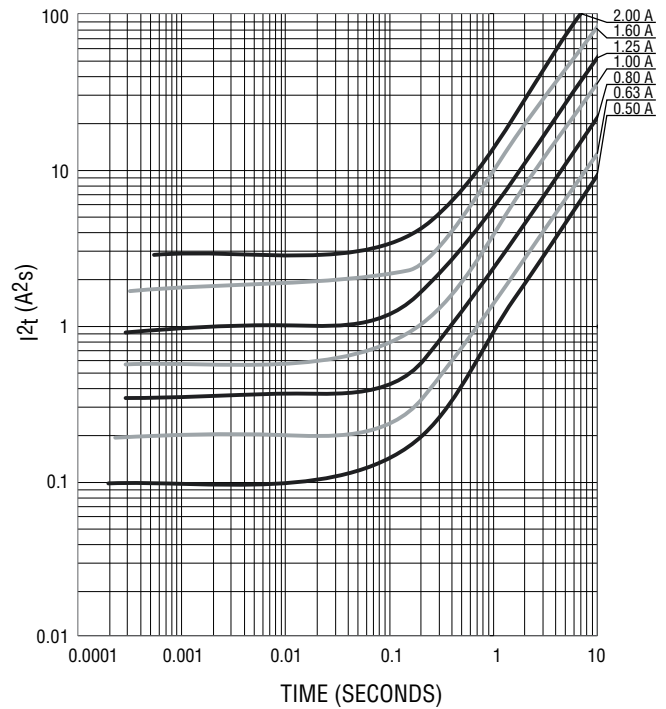
SF-2410SP-W Series – Time Lag Wire Core Surface Mount Fuses

BOURNS®

Average Pre-Arcing Time vs. Current Curves



Average I^2t 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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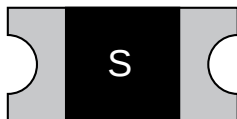
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SF-2410SP-W Series – Time Lag Wire Core Surface Mount Fuses

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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

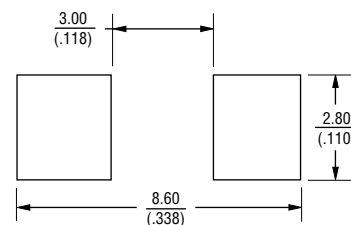
SF - 2410 SP 100 W - 2

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

Packaging

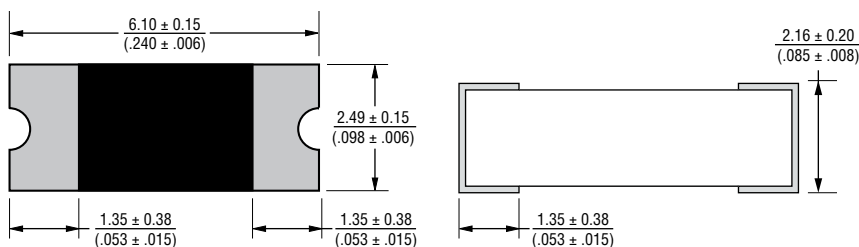
Reel Dimension	7-inch Tape and Reel
Specification	EIA 481-2
Quantity	2,000 pieces
Packaging Code	-2

Recommended Pad Layout



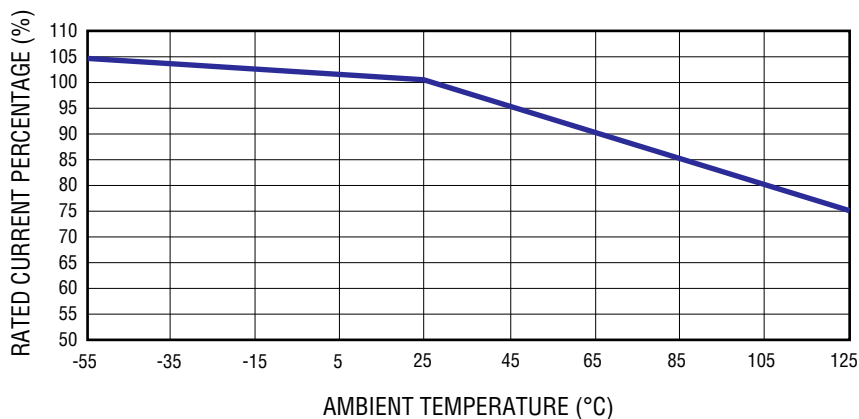
DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

Product Dimensions



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

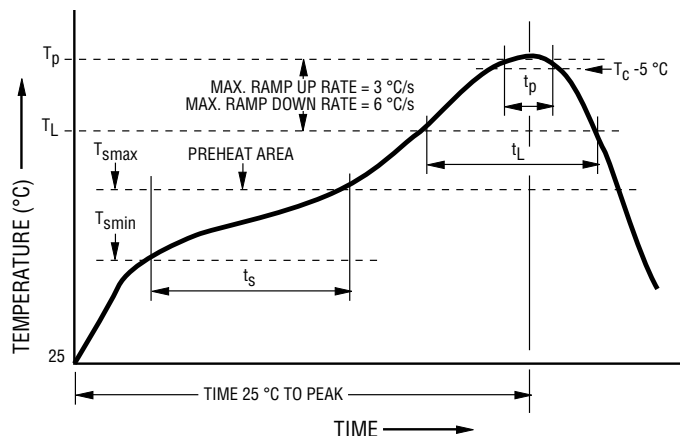
Current Rating Thermal Derating Curve



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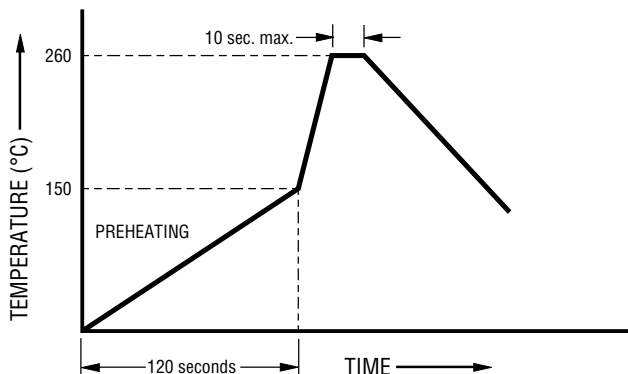
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Solder Reflow Recommendations

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.

Recommended Temperature Profile for Wave Soldering

Wave soldering is suitable for 2410 size models.

SF-2410SP-W Series – Time Lag Wire Core Surface Mount Fuses**BOURNS®****Reliability Testing**

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

REV. C 03/21

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