SingIFuse™ SF-2410FxxxW Series Features

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

SF-2410FxxxW Series - Fast Acting Wire Core Surface Mount Fuses

Electrical Characteristics

Model	Rated Current (Amps)	Fusing Time	Resistance (Ω) Typ.***	Rated Voltage	Interrupting Rating	Typical I^2t (A^2s) ****
SF-2410F1200W-2	12.0	Open within 20 sec. at 200 % rated current	0.0053	AC 65 V DC 65 V	AC 65 V 50 A DC 65 V 50 A DC 32 V 300 A	49.2
SF-2410F1500W-2	15.0		0.0038			102.5
SF-2410F2000W-2	20.0		0.0034		AC 65 V 50 A DC 65 V 100 A DC 32 V 300 A	126.2

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

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

Agency Recognition

UL File Number E198545

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* 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.

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

SingIFuse™ SF-2410FxxxW Series Applications

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

SF-2410FxxxW Series - Fast Acting Wire Core Surface Mount Fuses

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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 %
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.

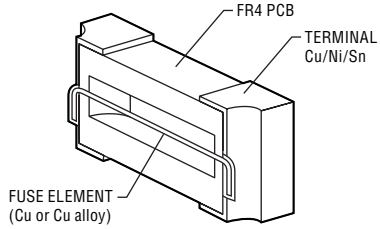
RATED CURRENT (A)
X= 12.0
Y = 15.0
Z = 20.0

How to Order

SF - 2410 F 1200 W - 2

SingIFuse™ Product Designator
SMD Footprint
2410 = 6125 (EIA 2410) size
Fuse Blow Type
F = Fast Acting
Rated Current
1200 ~ 2000 (12.0 A ~ 20.0 A)
Structure Type
W = Wire Core
Packaging Type
- 2 = Tape & Reel

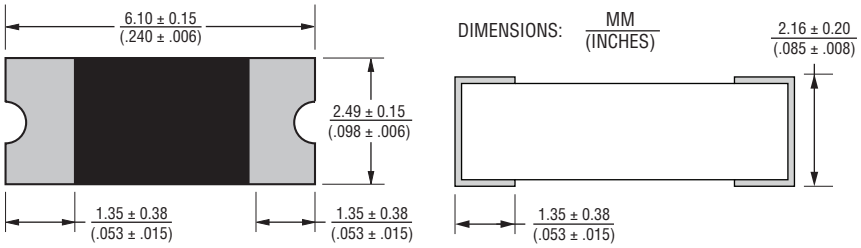
Construction



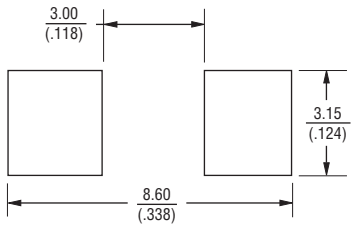
Packaging Quantity

2,000 pieces per 7-inch reel

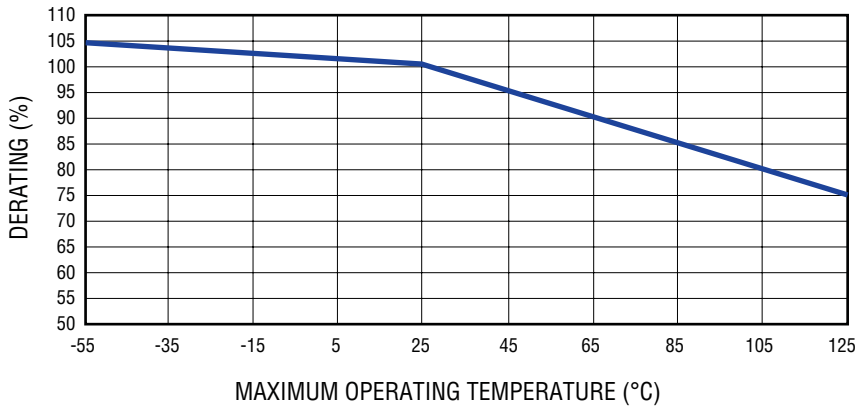
Product Dimensions



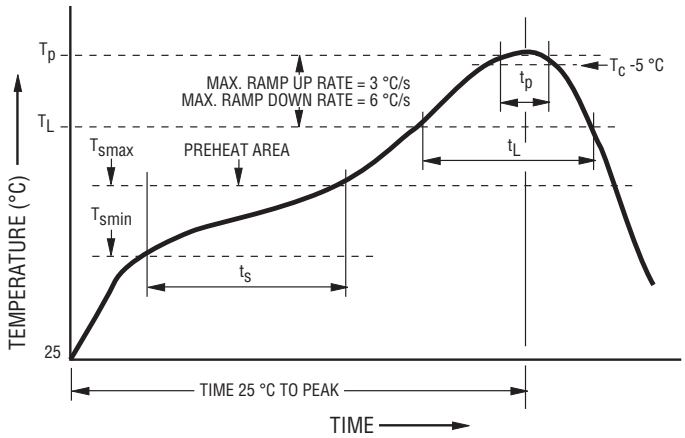
Recommended Pad Layout



Current Rating Thermal Derating Curve



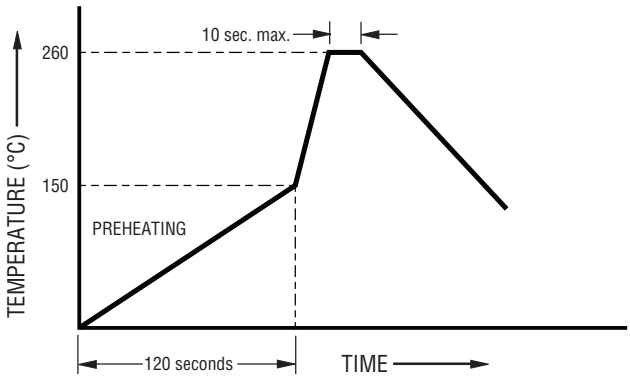
Solder Reflow Recommendations



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.

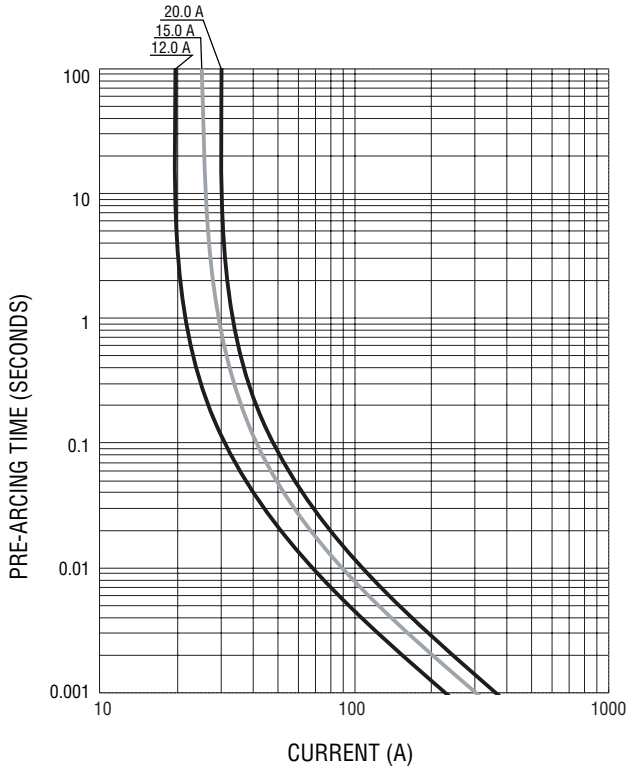
* Tolerance for peak profile temperature (Tp) is defined as a supplier minimum and a user maximum.

Recommended Temperature Profile for Wave Soldering

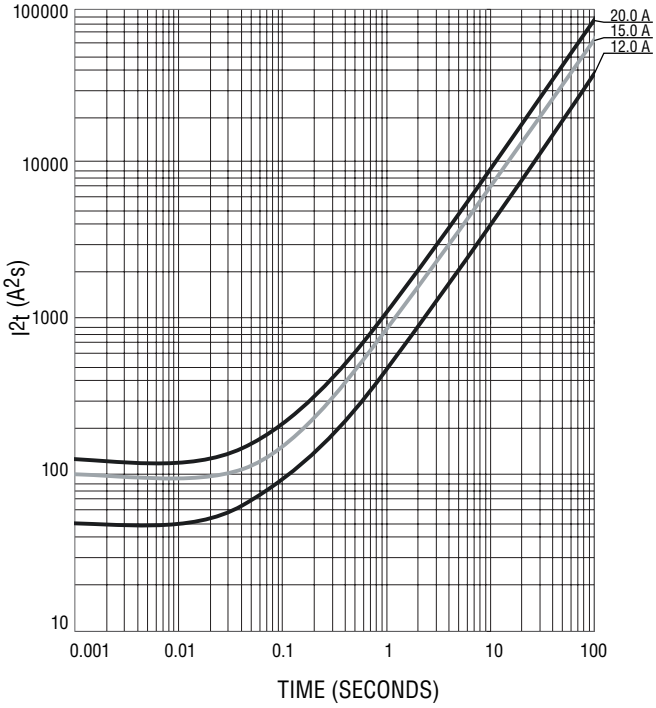


Wave soldering is suitable for 2410 size models.

Average Pre-Arcing Time vs. Current Curves



Average I^2t vs. t Curves



SF-2410FxxxW Series Tape and Reel Packaging Specifications

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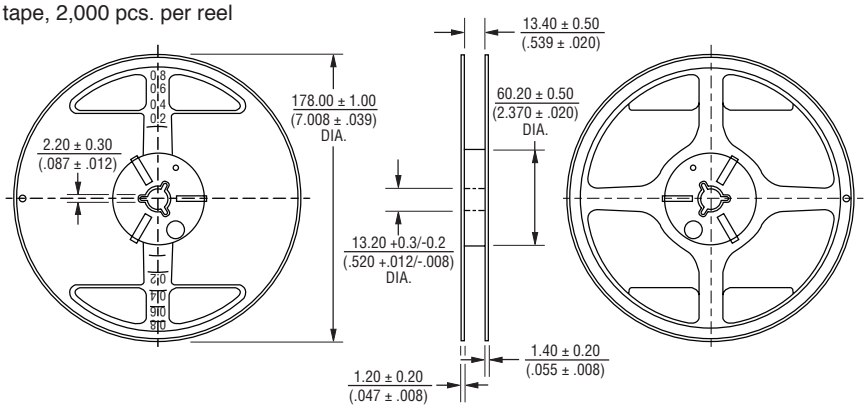
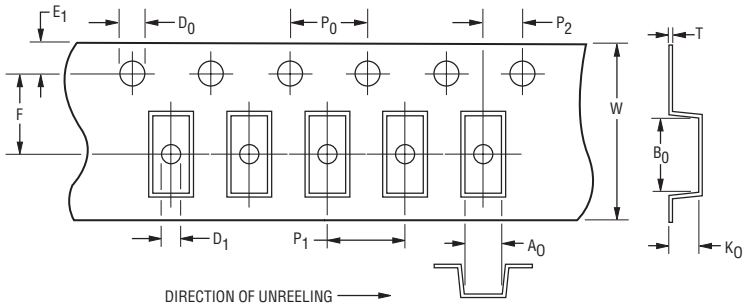
Tape Dimensions	SF-2410FxxxW Series per EIA 481-2
W	12.00 ± 0.10 (.48 ± .004)
P_0	4.0 ± 0.10 (.157 ± .004)
P_1	4.0 ± 0.10 (.157 ± .004)
P_2	2.0 ± 0.05 (.079 ± .002)
A_0	2.85 ± 0.10 (.114 ± .004)
B_0	6.40 ± 0.10 (.256 ± .004)
F	5.50 ± 0.10 (.220 ± .004)
E	1.75 ± 0.10 (.069 ± .004)
D_0	1.55 ± 0.10 (.059 ± .004)
D_1	1.55 ± 0.10 (.059 ± .004)
K_0	2.35 ± 0.10 (.094 ± .004)
T	0.25 ± 0.05 (.010 ± .002)

PACKAGING: Plastic tape, 2,000 pcs. per reel





DIMENSIONS: MM / (INCHES)

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