BOURNS®

SingIFuse™ SF-2410FP-T Series Features

- Single blow fuse for overcurrent protection
- EIA 2410 (6125 metric) footprint
- Ceramic tube design for fast acting precision fusing speed applications
- UL 248-14 compliant
- Surface mount packaging for automated assembly
- RoHS compliant* and halogen free**

SF-2410FP-T Series – Fast Acting Precision SMD Fuses

Clearing Time Characteristics for Series

% of Current Rating	Clearing Time at 25 °C	
	Min.	Max.
100 %	4 hours	—
200 %	—	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
SF-2410FP0062T-2	0.062	6.653	125 VDC	50 A @ 125 VAC 50 A @ 125 VDC 300 A @ 32 VDC	0.0012	✓
SF-2410FP008T-2	0.080	4.974			0.0017	✓
SF-2410FP010T-2	0.100	3.014			0.0043	✓
SF-2410FP0125T-2	0.125	2.044			0.0094	✓
SF-2410FP016T-2	0.160	0.8655			0.0116	✓
SF-2410FP020T-2	0.200	1.8535			0.0517	✓
SF-2410FP025T-2	0.250	1.119			0.0528	✓
SF-2410FP0315T-2	0.315	0.843			0.1365	✓
SF-2410FP0375T-2	0.375	0.732			0.1502	✓
SF-2410FP040T-2	0.400	0.4995			0.2149	✓
SF-2410FP050T-2	0.500	0.476			0.358	✓
SF-2410FP075T-2	0.750	0.2065			0.3761	✓
SF-2410FP100T-2	1.00	0.158			0.4143	✓
SF-2410FP150T-2	1.50	0.114			1.0606	✓
SF-2410FP200T-2	2.00	0.0605			1.08	✓
SF-2410FP250T-2	2.50	0.044			1.1471	✓
SF-2410FP300T-2	3.00	0.036			1.548	✓
SF-2410FP315T-2	3.15	0.033			2.6485	✓
SF-2410FP350T-2	3.50	0.029			2.695	✓
SF-2410FP400T-2	4.00	0.021			3.9744	✓
SF-2410FP500T-2	5.00	0.013			6.175	✓
SF-2410FP700T-2	7.00	0.01			9.016	✓
SF-2410FP800T-2	8.00	0.0085			16.758	✓
SF-2410FP1000T-2	10.00	0.006			24.42	✓

*** Resistance value measured with ≤10 % rated current at 25 °C ambient. Tolerance ± 30 %.
**** Melting I^2t calculated at 10 times rated current.

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.

SingIFuse™ SF-2410FP-T Series Applications

- Notebooks
- LCD Monitors
- LCD Backlight Inverters
- POE, POE+
- PC Servers
- Power Supplies
- Game Consoles
- White Goods

SF-2410FP-T Series – Fast Acting Precision SMD Fuses

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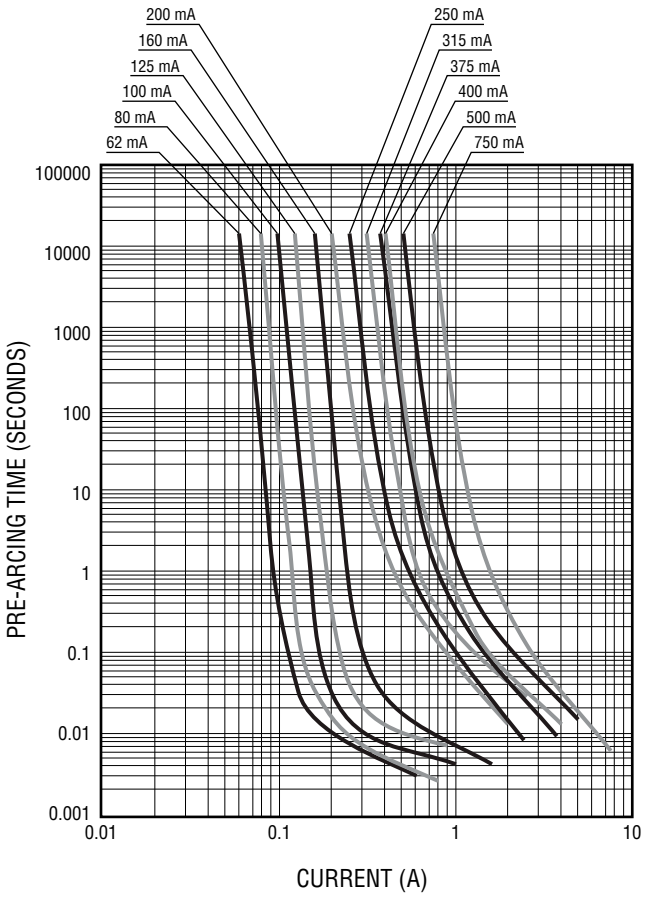
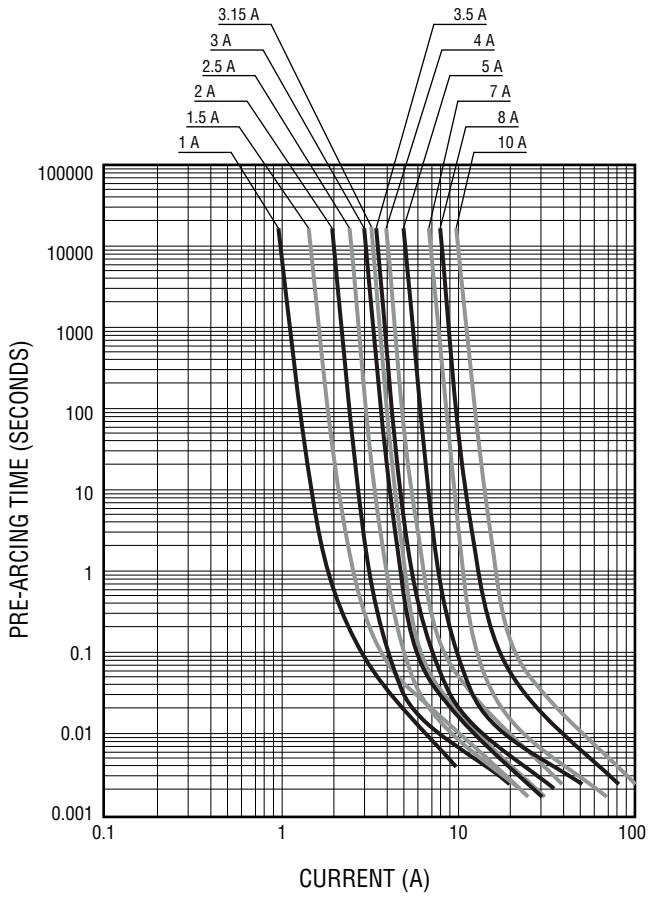
Environmental Characteristics

Operating Temperature ..... -55 °C to +125 °C
Storage Conditions
- Temperature ..... +15 °C to +30 °C
- Humidity ..... 20 % to 70 %
- Shelf Life ..... 2 years from manufacturing date

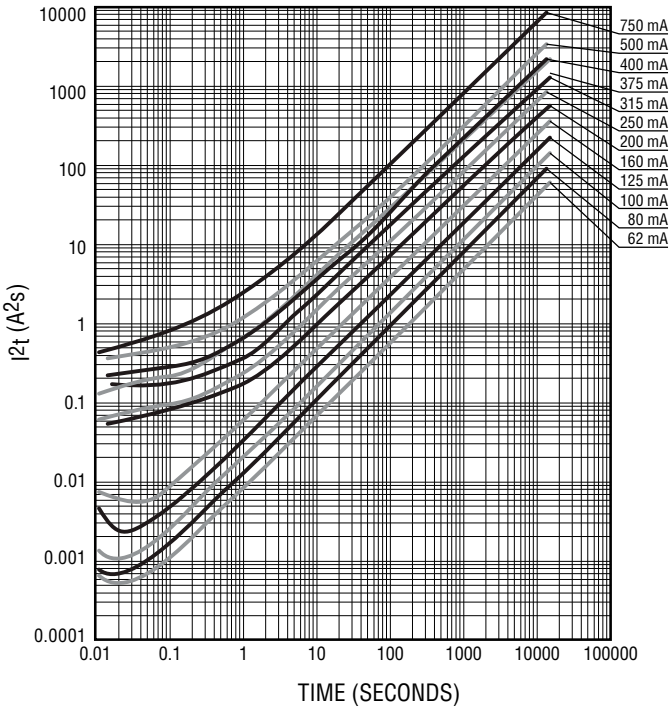
Moisture Sensitivity Level 1
ESD Classification (HBM) ..... Class 6

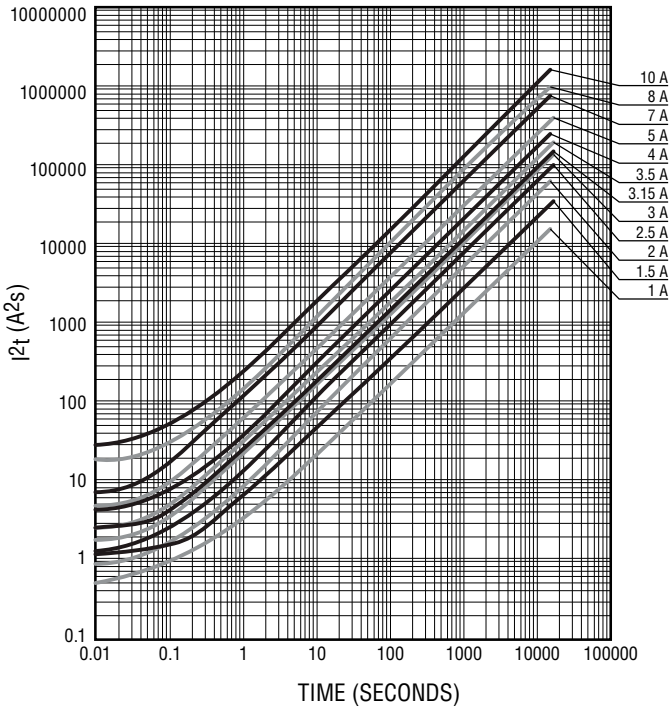
Average Pre-Arcing Time vs. Current Curves





Average I^2t vs. t Curves





SF-2410FP-T Series – Fast Acting Precision SMD Fuses

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How to Order

SF - 2410 FP 0062 T - 2

SinglFuse™
Product Designator

SMD Footprint
2410 = EIA 2410 (6125 metric)

Fuse Blow Type
FP = Fast Acting Precision

Rated Current
0062 ~ 1000 (62 mA ~ 10 A)

Structure Type
T = Ceramic Tube

Packaging Type
- 2 = Tape & Reel

Packaging

Reel Dimension	7-inch Tape and Reel
Specification	EIA 481-2
Quantity	1,000 pieces
Packaging Code	-2

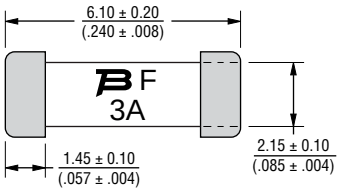
Typical Part Marking

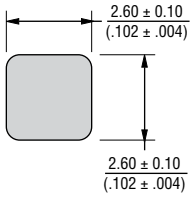
Represents total content. Layout may vary.

Rated Current	Part Marking
62 mA	62 mA
80 mA	80 mA
100 mA	100 mA
125 mA	125 mA
160 mA	160 mA
200 mA	200 mA
250 mA	250 mA
315 mA	315 mA
375 mA	375 mA
400 mA	400 mA
500 mA	500 mA
750 mA	750 mA

Rated Current	Part Marking
1 A	1 A
1.5 A	1.5 A
2 A	2 A
2.5 A	2.5 A
3 A	3 A
3.15 A	3.15 A
3.5 A	3.5 A
4 A	4 A
5 A	5 A
7 A	7 A
8 A	8 A
10 A	10 A

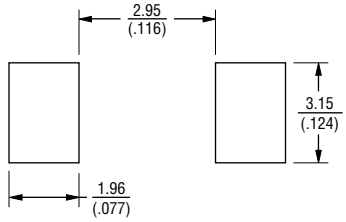
Product Dimensions





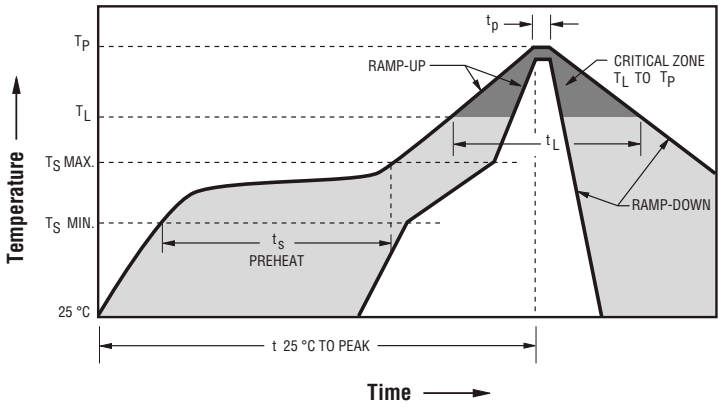
DIMENSIONS: MM / (INCHES)

Recommended Pad Layout



DIMENSIONS: MM / (INCHES)

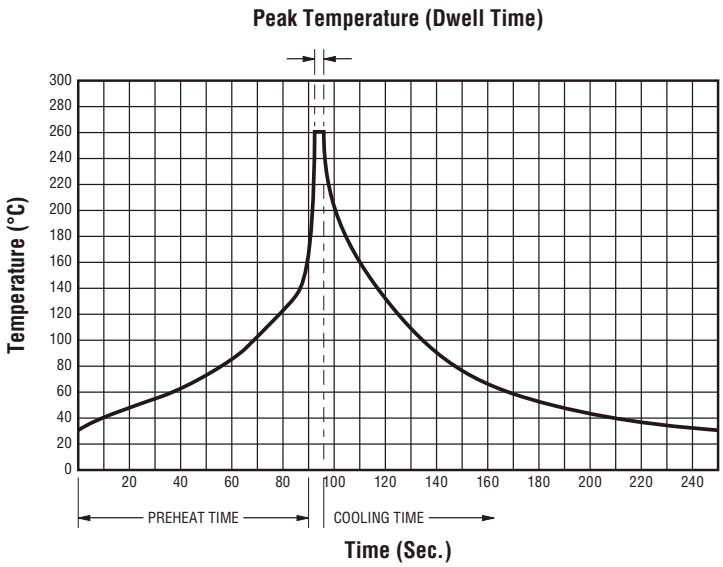
Solder Reflow Recommendations



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 60~180 seconds
Ramp Up Rate (T_L to T_p)	3 °C / second max.
Ramp Up Rate (T_{smax} to T_L)	5 °C / second max.
Liquidous Temperature (T_L) Time (t_L) maintained above T_L	217 °C 60~90 seconds
Peak Package Body Temperature (T_p)	235 °C ± 5 °C
Time within 5 °C of actual peak temperature (T_p)	20~30 seconds*
Ramp Down Rate (T_p to T_L)	6 °C / second max.
Time 25 °C to Peak Temperature	8 minutes max.
Do not exceed	240 °C

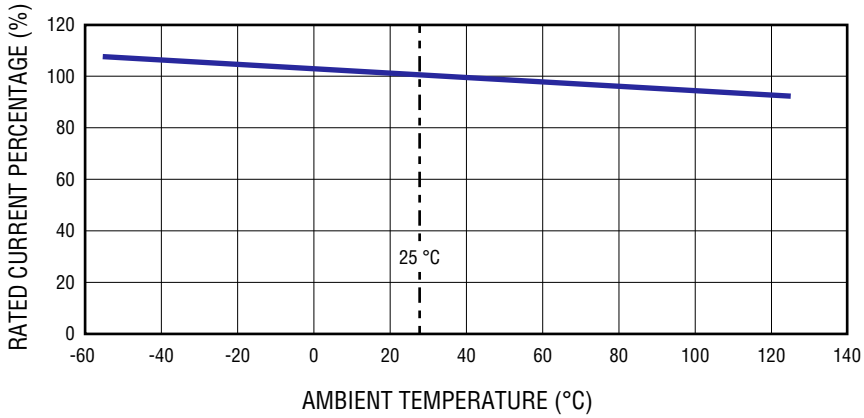
* Tolerance for peak profile temperature (Tp) is defined as a supplier minimum and a user maximum.

Solder Wave Recommendations



Profile Feature	Pb-Free Assembly
Preheat: Temperature Max. (T_{smax}) Time (Min. to Max.)	 150 °C 60~90 seconds
Solder Pot Temperature	260 °C max.
Solder Dwell Time	2~3 seconds

Current Rating Thermal Derating Curve



Reliability Testing

No.	Test	Test Condition	Requirement	Test Reference
1	Solderability	Temperature setup: 235 ±5 °C Time setup: 10 ±1 sec.	After test terminal electrode wetting area must be greater than 95 %	IEC 60068-2-58
2	Resistance to soldering heat	Temperature setup: 235 ±5 °C Time setup: 30 ± 5 sec.	DCR change ≤ ±15 %	IEC 60068-2-58
3	Thermal shock	Temperature setup: 25 °C ~ -65 °C ~ 25 °C ~ 125 °C Time setup: -65 °C (30 min) ~ 25 °C (5 min) ~ 125 °C (30 min) ~ 25 °C (5 min), 5 cycles	DCR change ≤ ±15 % No mechanical damage	MIL-STD-202G Method 107G Test Condition B
4	Humidity unload	Heat (85 ±0.5 °C) High Humidity (85 ±1 % RH) 240 hours	DCR change ≤ ±15 % No mechanical damage	MIL-STD-202G Method 103B Test Condition A
5	Salt spray	Salt spray concentration: 5 ±1 % Test liquid temperature: 35 ±0.5 °C 96 hours	DCR change ≤ ±15 % No mechanical damage	MIL-STD-202G Method 101E Test Condition A
6	Bending	The board shall be bent by 1 mm at a rate of 1 mm/sec.	DCR change ≤ ±15 %	IEC 60127-4
7	Vibration	Frequency setup: 10 ~ 55 ~ 10 Hz Time setup: 1 Minute/cycle (X-Y-Z, 120 cycles, 6 hours)	DCR change ≤ ±15 % No mechanical damage	MIL-STD-202G Method 201A

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