



SinglFuse™ SF-2410HI-T Series Features

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

SF-2410HI-T Series – High Inrush SMD Fuses

Clearing Time Characteristics for Series

| % of Current Rating | Clearing Time at 25 °C | |
|---------------------|------------------------|-------------|
| | Min. | Max. |
| 100 % | 4 hours | — |
| 200 % | 1 second | 60 seconds |
| 300 % | 0.2 seconds | 3 seconds |
| 800 % | 0.02 seconds | 0.1 seconds |

Additional Information

Click these links for more 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-2410HI0375T-2 | 0.375 | 0.6208 | 125 VAC | 50 A @ 125 VAC 50 A @ 125 VDC 300 A @ 32 VDC | 0.4147 | ✓ |
| SF-2410HI050T-2 | 0.50 | 0.3462 | | | 0.495 | ✓ |
| SF-2410HI075T-2 | 0.75 | 0.1666 | | | 1.2632 | ✓ |
| SF-2410HI100T-2 | 1.00 | 0.1079 | | | 1.9933 | ✓ |
| SF-2410HI150T-2 | 1.50 | 0.057 | | | 2.82 | ✓ |
| SF-2410HI200T-2 | 2.00 | 0.0509 | | | 7.488 | ✓ |
| SF-2410HI250T-2 | 2.50 | 0.0317 | | | 16.771 | ✓ |
| SF-2410HI300T-2 | 3.00 | 0.0228 | | | 24.99 | ✓ |
| SF-2410HI350T-2 | 3.50 | 0.0196 | | | 24.908 | ✓ |
| SF-2410HI400T-2 | 4.00 | 0.015 | | | 27.056 | ✓ |
| SF-2410HI500T-2 | 5.00 | 0.0112 | | | 50.308 | ✓ |
| SF-2410HI700T-2 | 7.00 | 0.0083 | | | 100.06 | ✓ |

*** Resistance value measured with ≤10 % rated current at 25 °C ambient. Tolerance ± 30 %.

**** Melting I²t 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.

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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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SinglFuse™ SF-2410HI-T Series Applications

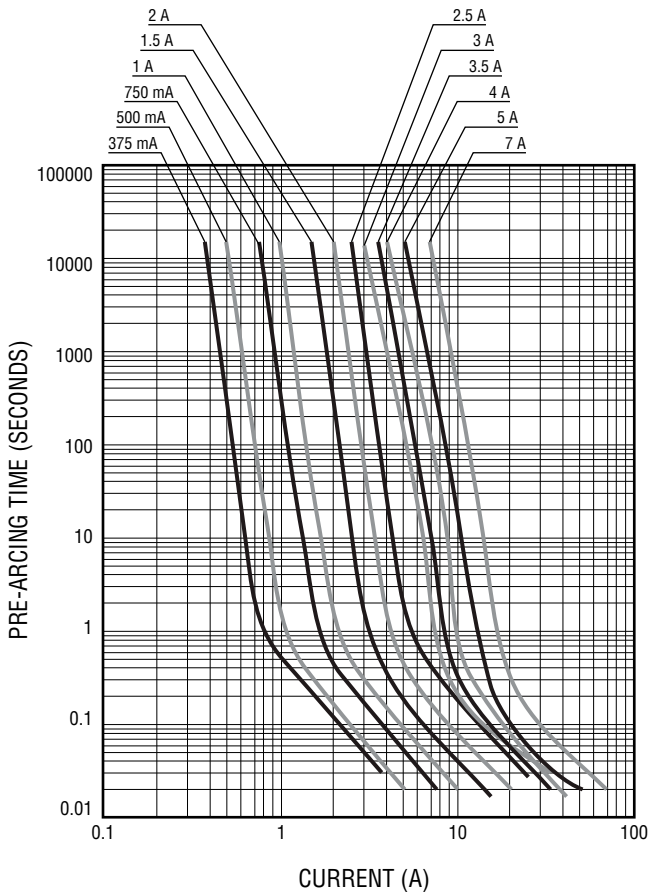
- Notebooks
- LCD Monitors
- LCD Backlight Inverters
- POE, POE+
- PC Servers
- Power Supplies
- Battery Protection
- White Goods

SF-2410HI-T Series – High Inrush SMD Fuses BOURNS®

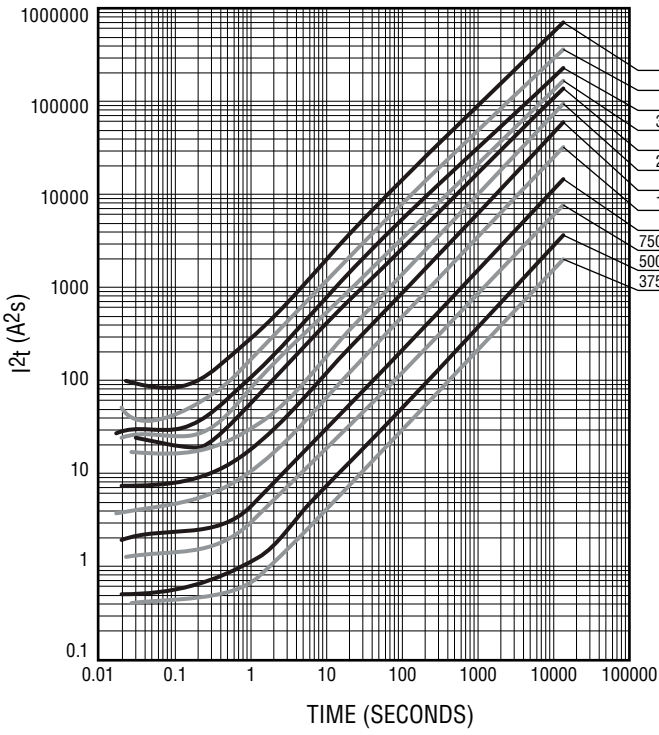
Environmental Characteristics

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 I²t vs. t Curves



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SF-2410HI-T Series – High Inrush SMD Fuses

BOURNS®

Typical Part Marking

Represents total content. Layout may vary.



| Rated Current | Part Marking |
|---------------|--------------|
| 375 mA | 375 mA |
| 500 mA | 500 mA |
| 750 mA | 750 mA |
| 1 A | 1 A |
| 1.5 A | 1.5 A |
| 2 A | 2 A |
| 2.5 A | 2.5 A |
| 3 A | 3 A |
| 3.5 A | 3.5 A |
| 4 A | 4 A |
| 5 A | 5 A |
| 7 A | 7 A |

How to Order

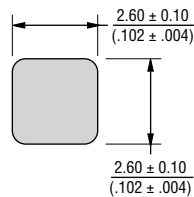
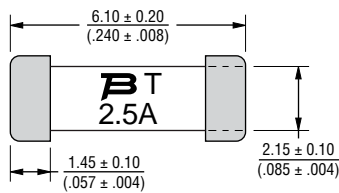
SF - 2410 HI 0375 T - 2

SinglFuse™ _____
 Product Designator _____
 SMD Footprint _____
 2410 = EIA 2410
 (6125 metric) _____
 Fuse Blow Type _____
 HI = High inrush _____
 Rated Current _____
 0375 ~ 700 (375 mA ~ 7 A) _____
 Structure Type _____
 T = Ceramic Tube _____
 Packaging Type _____
 - 2 = Tape & Reel _____

Packaging

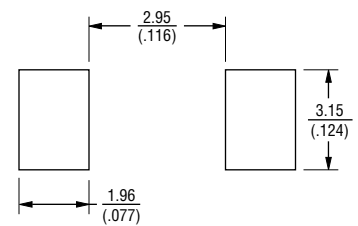
| | |
|----------------|----------------------|
| Reel Dimension | 7-inch Tape and Reel |
| Specification | EIA 481-2 |
| Quantity | 1,000 pieces |
| Packaging Code | -2 |

Product Dimensions



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

Recommended Pad Layout



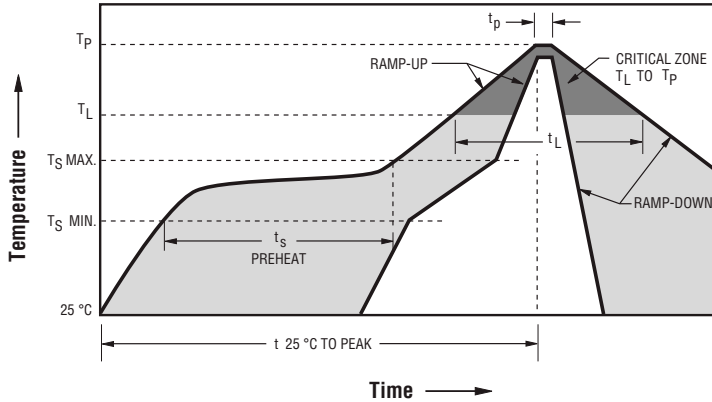
DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

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Solder Reflow Recommendations

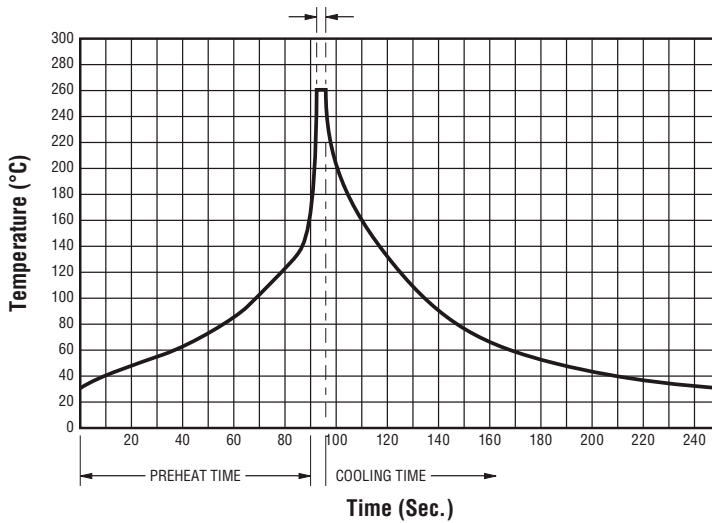


| Profile Feature | Pb-Free Assembly |
|---|------------------------------------|
| Preheat / Soak: Temperature Min. (T_{smin}) Temperature Max. (T_{smax}) Time (t_s) from (T_{smin} to T_{smax}) | 150 °C 200 °C 60~180 seconds |
| Ramp Up Rate (T_L to T_p) | 3 °C / second max. |
| Ramp Up Rate (T_{smax} 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 (T_p) is defined as a supplier minimum and a user maximum.

Solder Wave Recommendations

Peak Temperature (Dwell Time)



| 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 |

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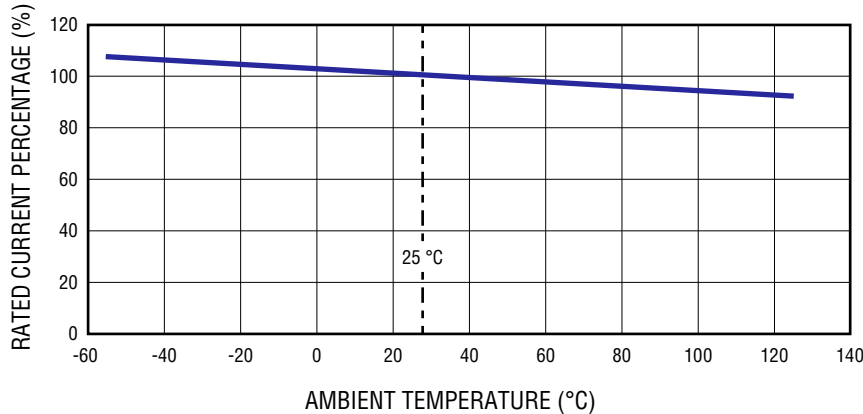
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Current Rating Thermal Derating Curve



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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