SingIFuse™ SF-0402F Series Features

- Single blow fuse for overcurrent protection
- 1005 (EIA 0402) miniature footprint
- Fast-acting fuse
- UL listed
- RoHS compliant* and halogen free**
- Thin film chip fuse
- Surface mount packaging for automated assembly

SF-0402F Series - Fast Acting Surface Mount Fuses

Electrical Characteristics

Model	Rated Current (Amps)	Fusing Time	Resistance (mΩ) Typ.***	Rated Voltage	Breaking Capacity	Typical I^2t (A^2s)
SF-0402F050	0.50	Open within 1 min. at 200 % rated current	320	DC 24 V	DC24 V 35 A	0.00317
SF-0402F075	0.75		110			0.0049
SF-0402F080	0.80		120			0.00532
SF-0402F100	1.00		90			0.00724
SF-0402F125	1.25		67			0.01344
SF-0402F150	1.50		51			0.01356
SF-0402F160	1.60		46			0.01672
SF-0402F200	2.00		33			0.01983
SF-0402F250	2.50		25			0.03763
SF-0402F300	3.00		20			0.05427
SF-0402F315	3.15		19			0.06304
SF-0402F400	4.00		16			0.0896

***Resistance value was measured with less than 10 % of rated current.

Reliability Testing

Parameter	Requirement	Test Method
Carrying Capacity	No fusing	Rated current, 4 hours
Fusing Time	Within 1 minute	200 % of its rated current
Interrupting Ability	No mechanical damages	After the fuse is interrupted, rated voltage applied for 30 seconds again
Bending Test	No mechanical damages	Distance between holding points: 90 mm, Bending: 3 mm,1time, 30 seconds
Resistance to Solder Heat	±20 %	260 °C ±5 °C,10 seconds ±1 second
Solderability	95 % coverage minimum	235 °C ±5 °C, 2 ±0.5 second 245 °C ±5 °C, 2 ±0.5 second (lead free)
Temperature Rise	<75 °	100 % of its rated current, measure of surface temperature
Resistance to Dry Heat	±20 %	105 °C ±5 °C,1000 hours
Resistance to Solvent	No evident damage on protective	23 °C ±5 °C of isopropyl alcohol, 90 seconds coating and marking
Residual Resistance	10k W or more	Measure DC resistance after fusing
Thermal Shock	DR < 10 %	-20 °C / +25 °C /+125 °C /+25 °C, 10 cycles

Typical Part Marking

Represents total content. Layout may vary.

RATING CURRENT (A)

F = 0.50	N = 1.60
• = 0.75	S = 2.00
K = 0.80	T = 2.50
L = 1.00	3 = 3.00
M = 1.25	U = 3.15
P = 1.50	W = 4.00

How to Order

SF - 0402 F 050 - 2

- SF — SingIFuse™ Product Designator
- 0402 — SMD Footprint: 1005 (EIA 0402) size
- F — Fuse Blow Type: F = Fast acting, S = Slow blow
- 050 — Rated Current: 050-400 (500 mA - 4.00 A)
- 2 — Packaging Type: 2 = Tape & Reel (10,000 pcs./reel)

BOURNS®

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www.bourns.com

* RoHS Directive 2002/95/EC Jan 27 2003 including Annex.
** Bourns is using the definition that appears to be the prevalent definition used as the industry standard at this time. The Bourns definition of "halogen-free" is: Bromine (Br) content: ≤ 900 ppm; Chlorine (Cl) content: ≤ 900 ppm; Total Br + Cl content: ≤1500 ppm.

"SingIFuse" is a trademark of Bourns, Inc.
Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.

SingIFuse™ SF-0402F Series Applications

- Portable memory
- LCD monitors
- Disk drives
- PDAs
- Digital cameras
- DVDs
- Cell phones
- Rechargeable battery packs
- Battery chargers
- Set top boxes
- Industrial controllers

SF-0402F Series - Fast Acting Surface Mount Fuses

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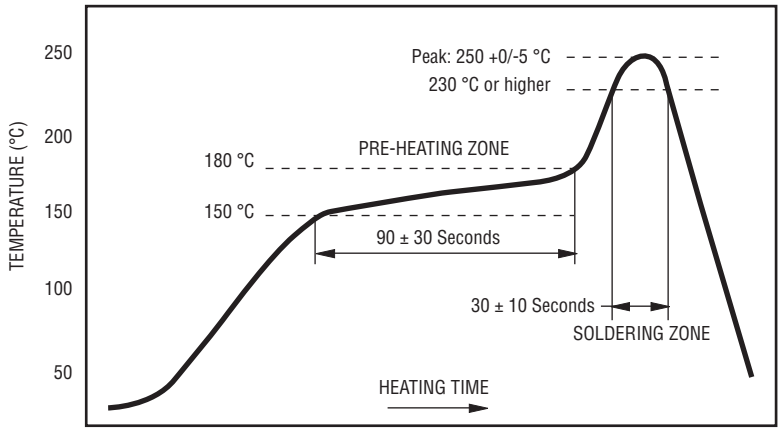
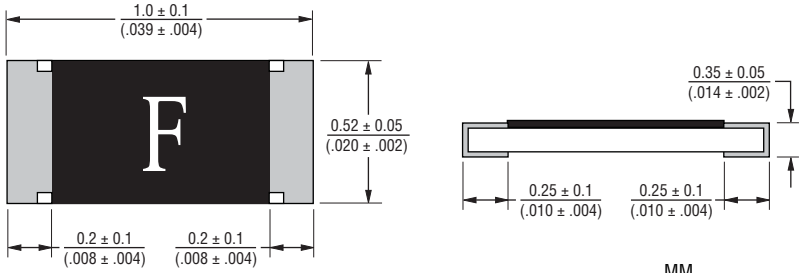
Solder Reflow Recommendations



PEAK: 250 +0/-5 °C, 5 seconds
PRE-HEATING ZONE: 150 to 180 °C, 90 ± 30 seconds
SOLDERING ZONE: 230 °C or higher, 30 ± 10 seconds

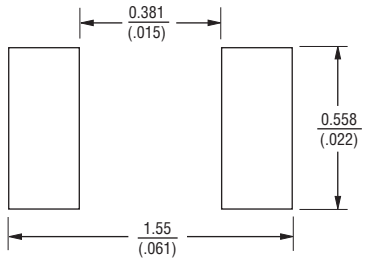
Product Dimensions



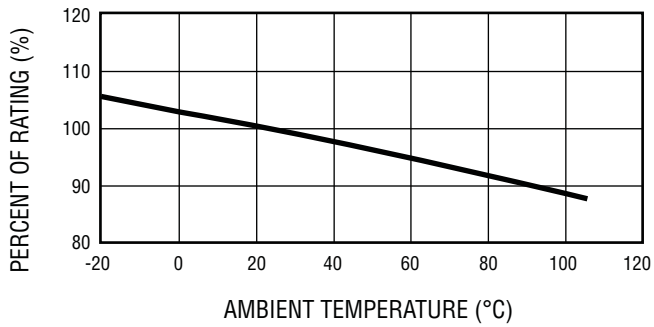
DIMENSIONS: MM / (INCHES)

PACKAGING: 10,000 pcs./reel

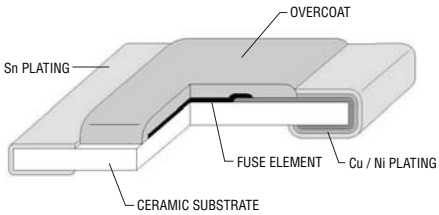
Recommended Pad Layout



Thermal Derating Curve



Construction & Material Content



Operating Temperature.....-40 °C to +105 °C
Storage Conditions
Temperature .....+5 °C to +35 °C
Humidity.....40 % to 75 %
Shelf Life..... 2 years from manufacturing date

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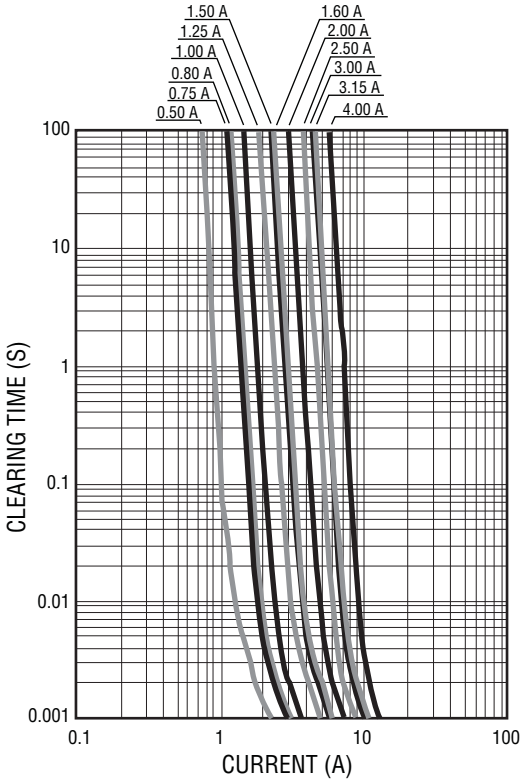
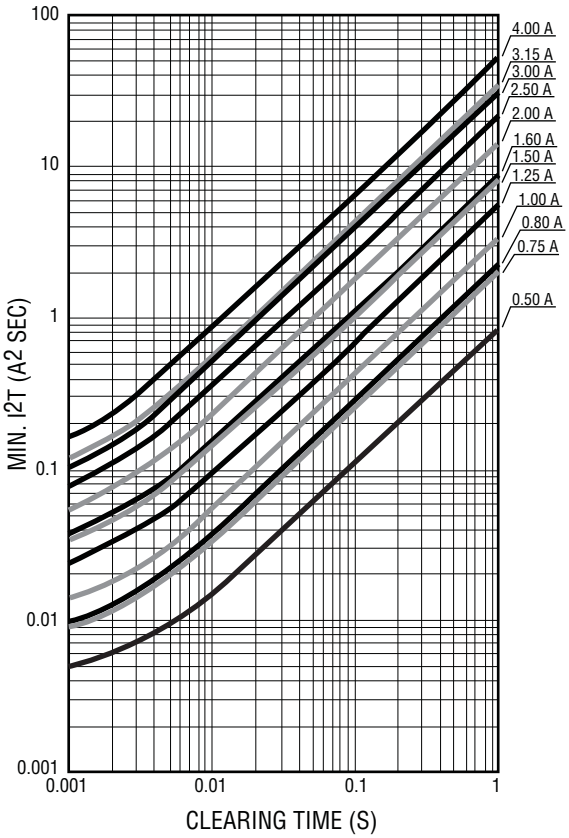
Average Time Current Curves



Minimum I²T V Clear Time Curves



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SF-0402F Series Tape and Reel Specifications

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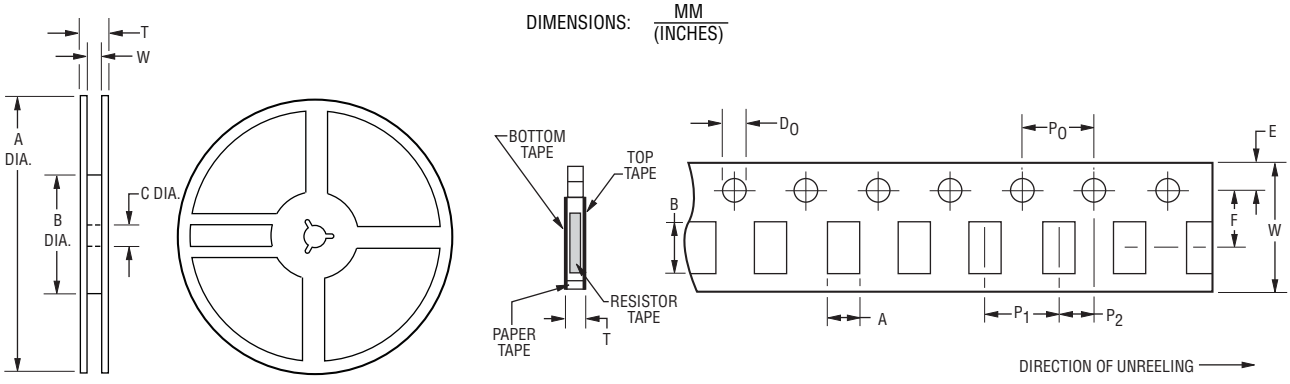
Tape Dimensions	SF-0402F Series per EIA 481-2
W	8.0 ± 0.2 (.315 ± .008)
P_0	4.0 ± 0.1 (.157 ± .004)
P_1	2.0 ± 0.1 (.079 ± .004)
P_2	2.0 ± 0.05 (.079 ± .002)
A	0.7 ± 0.05 (.028 ± .002)
B	1.2 ± 0.05 (.047 ± .002)
F	3.5 ± 0.05 (.138 ± .002)
E	1.75 ± 0.1 (.069 ± .004)
D_0	1.5 + 0.1 (.059 + .004)
T	0.45 ± 0.01 (.018 ± .004)
Reel Dimensions	
A	180 +0/-3.0 (7.087 +0/-.118)
B Min.	60.0 (2.362)
C	13.0 ± 1.0 (.512 ± .039)
W	9.0 ± 1.0 (.354 ± .039)
T	11.4 ± 2.0 (.449 ± .079)



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Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
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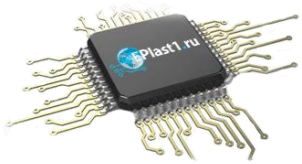
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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