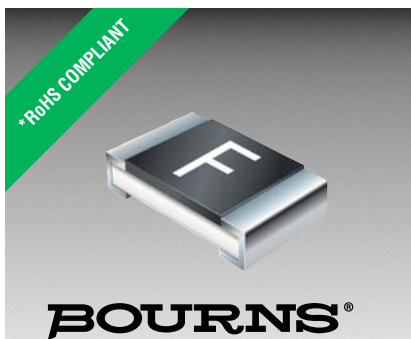




SinglFuse™ SF-0603F Series Features

- Single blow fuse for overcurrent protection
- 1608 (EIA 0603) miniature footprint
- Fast-acting fuse
- UL listed
- RoHS compliant* and halogen free**
- Thin film chip fuse
- Surface mount packaging for automated assembly

SF-0603F Series - Fast Acting Surface Mount Fuses

Electrical Characteristics

Model	Rated Current (Amps)	Fusing Time	Resistance (mΩ) Typ.***	Rated Voltage	Breaking Capacity	Typical I ² t (A ² s)
SF-0603F050	0.50	Open within 1 min. at 200 % rated current	250	DC 50 V	DC 50 V 50 A	0.005
SF-0603F063	0.63		173	DC 32 V	DC 32 V 50 A	0.007
SF-0603F080	0.80		115			0.014
SF-0603F100	1.00		88			0.016
SF-0603F125	1.25		63			0.027
SF-0603F150	1.50		45			0.037
SF-0603F160	1.60		42			0.041
SF-0603F200	2.00		33			0.044
SF-0603F250	2.50		24	DC 24 V	DC 24 V 50 A	0.055
SF-0603F300	3.00		21			0.082
SF-0603F315	3.15		19			0.089
SF-0603F400	4.00		15	DC 32 V	DC 32 V 50 A	0.239
SF-0603F500	5.00		12			0.433

***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, 1 time, 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
Temperature Rise	<75 °	245 °C ±5 °C, 2 ±0.5 second (lead free)
Resistance to Dry Heat	±20 %	100 % of its rated current, measure of surface temperature
Resistance to Solvent	No evident damage on protective	105 °C ±5 °C, 1000 hours
Residual Resistance	10k W or more	23 °C ±5 °C of isopropyl alcohol, 90 seconds coating and marking
Thermal Shock	DR < 10 %	Measure DC resistance after fusing
		-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 S = 2.00
 I = 0.63 T = 2.50
 K = 0.80 3 = 3.00
 L = 1.00 U = 3.15
 M = 1.25 W = 4.00
 P = 1.50 Y = 5.00
 N = 1.60

How to Order

SF - 0603 F 050 - 2

SinglFuse™
 Product Designator

SMD Footprint
 1608 (EIA 0603) size

Fuse Blow Type
 F = Fast acting
 S = Slow blow

Rated Current
 050-500 (500 mA - 5.00 A)

Packaging Type
 - 2 = Tape & Reel (5,000 pcs./reel)

BOURNS®

Asia-Pacific:

Tel: +886-2 2562-4117
 Fax: +886-2 2562-4116

Europe:

Tel: +41-41 768 5555
 Fax: +41-41 768 5510

The Americas:

Tel: +1-951 781-5500
 Fax: +1-951 781-5700

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.

"SinglFuse" 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.

SinglFuse™ SF-0603F 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-0603F Series - Fast Acting Surface Mount Fuses

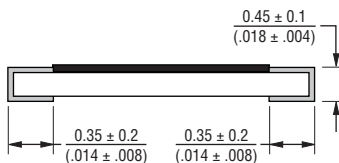
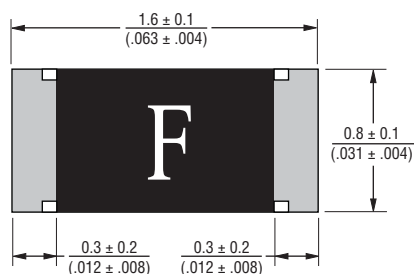
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Solder Reflow Recommendations



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

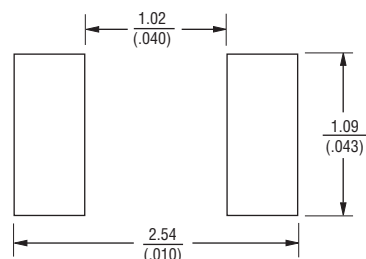
Product Dimensions



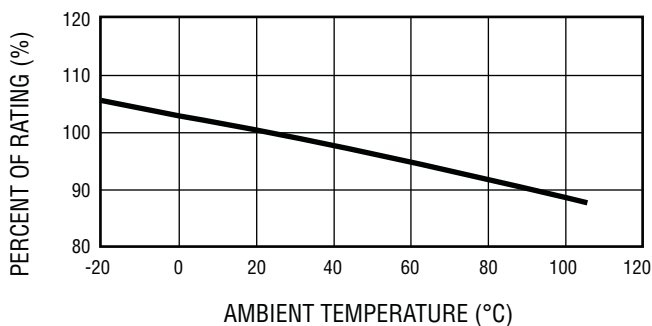
DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

PACKAGING: 5,000 pcs./reel

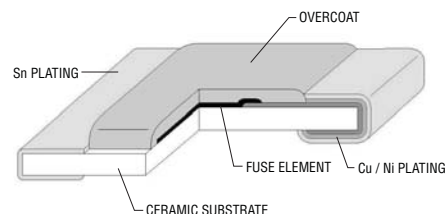
Recommended Pad Layout



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 %

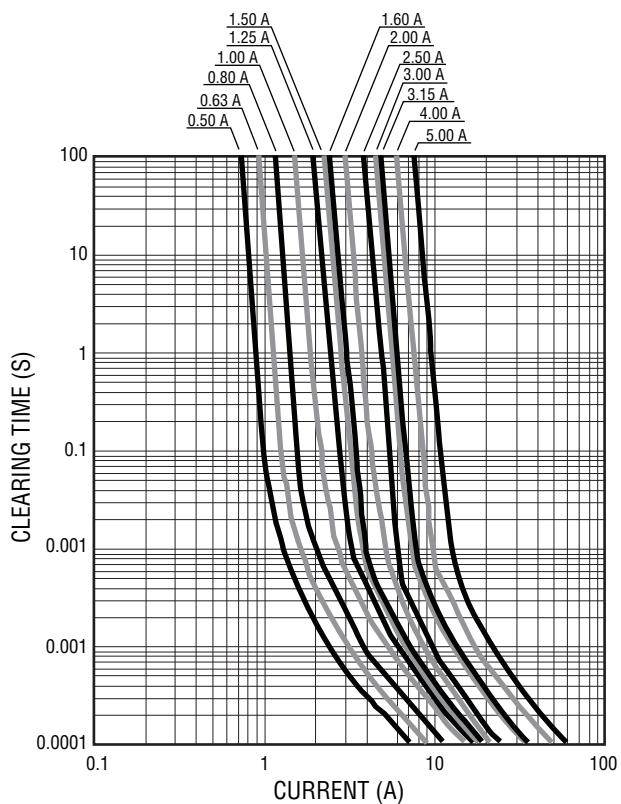
Shelf Life.....2 years from manufacturing date

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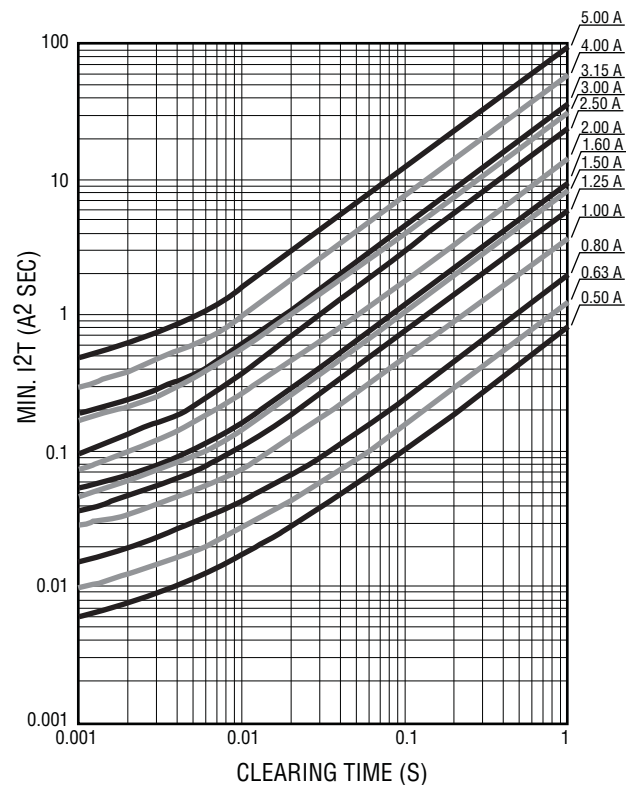
SF-0603F Series - Fast Acting Surface Mount Fuses

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Average Time Current Curves



Minimum I²T V Clear Time Curves



REV. D 03/13

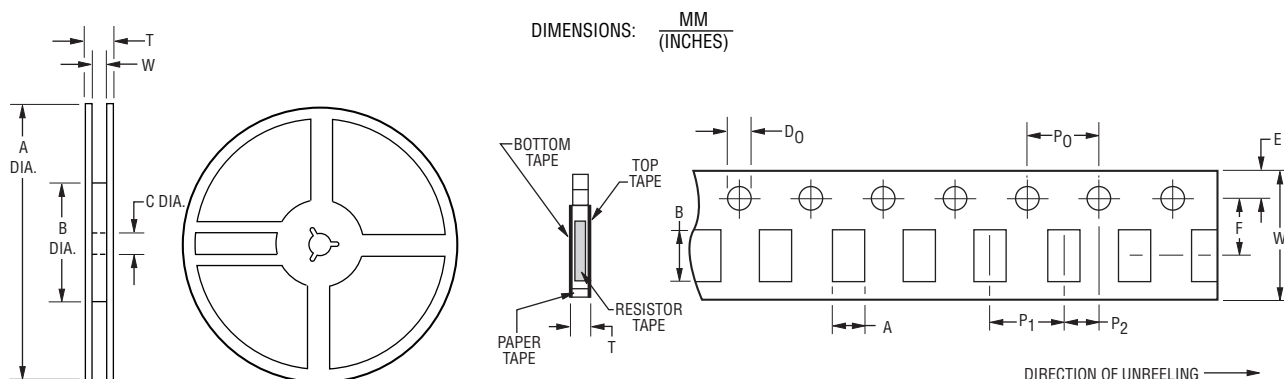
Specifications are subject to change without notice.

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SF-0603F Series Tape and Reel Specifications

BOURNS®

Tape Dimensions	SF-0603F Series per EIA 481-2
W	$\frac{8.0 \pm 0.2}{(.315 \pm .008)}$
P ₀	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$
P ₁	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$
P ₂	$\frac{2.0 \pm 0.05}{(.079 \pm .002)}$
A	$\frac{1.1 \pm 0.1}{(.043 \pm .004)}$
B	$\frac{1.9 \pm 0.1}{(.075 \pm .004)}$
F	$\frac{3.5 \pm 0.05}{(.138 \pm .002)}$
E	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$
D ₀	$\frac{1.5 + 0.1/-0}{(.059 + .004/-0)}$
T	$\frac{0.64 \pm 0.1}{(.025 \pm .004)}$
Reel Dimensions	
A	$\frac{180 +0/-3.0}{(7.087 +0/- .118)}$
B Min.	$\frac{60.0}{(2.362)}$
C	$\frac{13.0 \pm 1.0}{(.512 \pm .039)}$
W	$\frac{9.0 \pm 1.0}{(.354 \pm .039)}$
T	$\frac{11.4 \pm 2.0}{(.449 \pm .079)}$



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.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- 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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