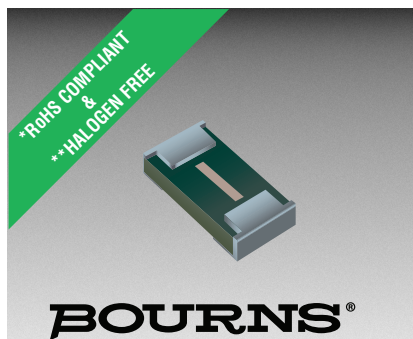




SinglFuse™ SF-0402FPxxx F Series Features

- Single blow fuse for overcurrent protection
- 1005 (EIA 0402) miniature footprint
- Fast-acting precision fuse
- UL 248-14 listed
- RoHS compliant* and halogen free**
- Thin film chip design
- Surface mount packaging for automated assembly

SF-0402FPxxx F Series - Fast Acting Precision Surface Mount Fuses

Electrical Characteristics

Model	Rated Current (Amps)	Fusing Time	Resistance (Ω) Typ.***	Rated Voltage	Interrupting Rating	Typical I ² t (A ² s) ****
SF-0402FP020F	0.20	Open within 5 sec. at 300 % rated current	0.60	DC 35 V	DC 35 V 35 A	0.0017
SF-0402FP025F	0.25		0.33			0.0035
SF-0402FP0375F	0.375	Open within 5 sec. at 200 % rated current	0.24			0.0036
SF-0402FP050F	0.50		0.16			0.0060
SF-0402FP075F	0.75		0.10			0.0120
SF-0402FP100F	1.00		0.073			0.024
SF-0402FP125F	1.25		0.054			0.045
SF-0402FP150F	1.50		0.040			0.081
SF-0402FP175F	1.75		0.034			0.092
SF-0402FP200F	2.00		0.031			0.120
SF-0402FP250F	2.50		0.018			0.220
SF-0402FP300F	3.00		0.015			0.270
SF-0402FP350F	3.50		0.012			0.340
SF-0402FP400F	4.00		0.011			0.360
SF-0402FP500F	5.00		0.009			0.550

*** Resistance value measured with $\leq 10\%$ rated current at 25 °C ambient.

**** Melting I²t calculated at 0.001 second pre-arcing time.

Reliability Testing

No.	Test	Requirement	Test Condition	Test Reference
1	Bending	≤ 1 A: DCR change $\leq \pm 10\%$ > 1 A: DCR change $\leq \pm 20\%$	2 mm	Refer to STP document
2	Solderability	Minimum 95 % coverage	One dip at 255 °C for 5 seconds	MIL-STD-202 Method 208
3	Thermal shock	DCR change $\leq \pm 10\%$ No mechanical damage	100 cycles between -55 °C and +125 °C	MIL-STD-202 Method 107
4	Moisture resistance	DCR change $\leq \pm 10\%$ No excessive corrosion	10 cycles	MIL-STD-202 Method 106
5	Salt spray	DCR change $\leq \pm 10\%$ No excessive corrosion	48 hour exposure, 5 % salt solution	MI L-STD-202 Method 101
6	Mechanical vibration	DCR change $\leq \pm 10\%$ 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 $\leq \pm 10\%$ No mechanical damage	1500 G, 0.5 ms, half-sine shocks	MIL-STD-202 Method 213
8	Life	No electrical "opens" during testing Voltage drop change shall be less than $\pm 10\%$ of initial value	75 % rated current for 2000 hours at ambient temperature between +20 °C and +30 °C	Refer to STP document

* 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.

"SinglFuse" is a trademark of Bourns, Inc.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

SinglFuse™ SF-0402FPxxx F Series Applications

- Portable memory
- LCD monitors
- Disk drives
- PDAs
- Digital cameras
- MP3 players
- Cell phones
- Rechargeable battery packs
- Battery chargers
- Set-top boxes
- Industrial controllers
- Battery Management Systems (BMS)
- LED lighting
- Power tools

SF-0402FPxxx F Series - Fast Acting Precision Surface Mount Fuses

BOURNS®

Environmental Characteristics

Operating Temperature.....-55 °C to +90 °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)

.. = 0.200	⊕ = 1.00	H = 2.50
: = 0.250	× = 1.25	III = 3.00
... = 0.375	II = 1.50	IIII = 3.50
I = 0.500	= = 1.75	□ = 4.00
— = 0.750	± = 2.00	○ = 5.00

How to Order

SF - 0402 FP 050 F - 2

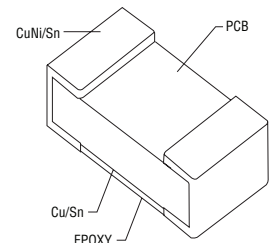
SinglFuse™
 Product Designator
 SMD Footprint
 0402 = 1005 (EIA 0402) size
 Fuse Blow Type
 FP = Fast acting precision
 Rated Current
 020 ~ 500 (200 mA ~ 5.00 A)
 Structure Type
 F = Thin film
 Packaging Type
 - 2 = Tape & Reel

Agency Recognition

UL File Number E198545

<http://www.ul.com/> Follow link to Online
 Certificates Directory,
 then enter UL File No.
 E198545, or [click here](#)

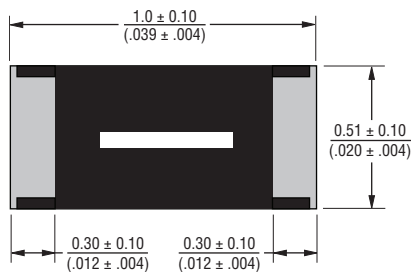
Construction



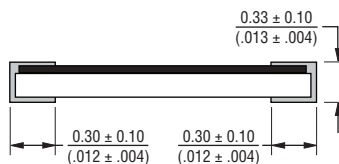
Packaging Quantity

20,000 pieces per 7-inch reel

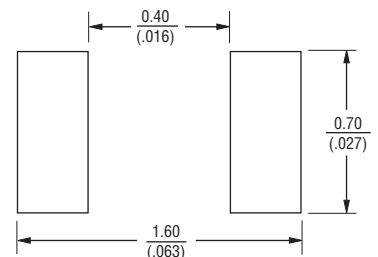
Product Dimensions



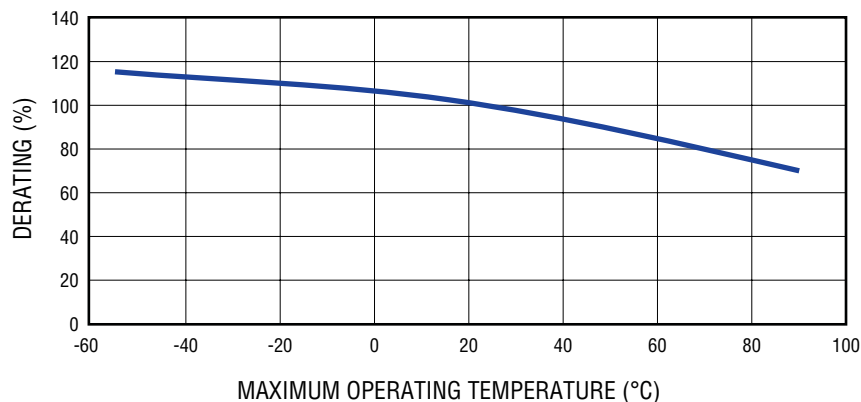
DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$



Recommended Pad Layout



Current Rating Thermal Derating Curve



Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.