



SinglFuse™

SMD Fuse Brochure



BOURNS®

Bourns® SinglFuse™ SMD Fuses Product Overview

INTRODUCTION

Bourns® SinglFuse™ SMD fuses provide effective overcurrent protection in standard surface mount footprint sizes ranging from 0402 (1005 metric) to 3812 (10030 metric), and include a variety of fusing speeds, current and voltage ratings, and rated operating temperatures. The breadth of Bourns' comprehensive line of SMD fuses provides suitable overcurrent protection solutions for applications including, but not limited to, automotive*, battery management systems, power supplies, DC-DC converters, consumer electronics, telecom systems, industrial controllers and battery chargers.

HOW TO ORDER

SinglFuse™ SMD Fuse Product Designator

SF - 2410 FP A 100 W - 2

SMD Footprint

SMD Size Code (3812, 2923, 2410, 1206, 0603, 0402)

Fusing Time & Fuse Category

FP/FR = 5 Sec. Max. @ 200 % I_n

HI = 1 - 60 Sec. @ 200 % I_n

SP = 1 - 120 Sec. @ 200 % I_n

S/SC = 5 Sec. Max. @ 250 % I_n

F/FG = 60 Sec. Max. @ 200 % I_n

TL = 120 Sec. Max. @ 250 % I_n

HH/HV = 5 Sec. Max. @ 350 % I_n

HC = 60 Sec. Max. @ 250 % I_n

TM = 1 - 120 Sec. @ 250 % I_n

Automotive Grade*

Rating Current

e.g., "010" = 0.10 A, "100" = 1.00 A, "1000" = 10.00 A, etc.

Fuse Structure Type

Blank = Thin Film Ceramic

W = Wire Core/PCB

T = Wire Core/Ceramic

R = Metal Foil

F = Thin Film PCB

M = Multilayer Ceramic

C = Ceramic Cube

Packaging Type

2 = Tape & Reel Packaging

*Meets Bourns' internal AEC-Q200 equivalent test plan.

SINGLIFUSE™ SMD FUSE PRODUCT LINE CHART







Technology	Series	General Purpose						Automotive Grade*		
		0402	0603	1206	2410	3812	2923	0603	1206	2410
Thin Film (PCB)	SF-xxxx-F	0.15 A — 5 A								
Thin Film (Ceramic)	SF-xxxx	0.315 A		7 A						
Metal Foil	SF-xxxx-R SF-xxxx-A-R		1 A — 30 A					1 A — 30 A		
Multilayer (Ceramic)	SF-xxxx-M SF-xxxx-A-M	0.5 A		40 A				0.5 A — 8 A		
Wire Core (PCB)	SF-xxxx-W SF-xxxx-A-W			0.5 A — 20 A						1 A — 20 A
Wire Core (Ceramic)	SF-xxxx-T				0.62 A — 60 A					
Ceramic Tube	SF-xxxx-C						20 A — 50 A			

*Meets Bourns' internal AEC-Q200 equivalent test plan.














General Purpose Singlfuse™ SMD Fuses

0402 FOOTPRINT







Model Series	Photo	Fusing Characteristic	Rated Current/Voltage	Rated Temperature	Agency Recognition
SF-0402FP-F		200 % I _F in 5 sec.	0.2 A 35 VDC 5 A	-55 °C to +90 °C	UL
SF-0402F		200 % I _F in 60 sec.	0.315 A 32 VDC 4 A	-20 °C to +105 °C	UL
SF-0402FP		200 % I _F in 5 sec.	0.5 A 32 VDC 4 A	-20 °C to +105 °C	UL
SF-0402FR		200 % I _F in 5 sec.	0.63 A 32 VDC 5 A	-20 °C to +105 °C	UL
SF-0402S		250 % I _F in 5 sec.	0.5 A 32 VDC 4 A	-20 °C to +105 °C	UL
SF-0402S-M		250 % I _F in 5 sec.	0.5 A 24 VDC 4 A	-55 °C to +125 °C	UL








0603 FOOTPRINT

Model Series	Photo	Fusing Characteristic	Rated Current/Voltage	Rated Temperature	Agency Recognition
SF-0603FP-F		200 % I _F in 5 sec.	0.15 A 35 VDC 5 A	-55 °C to +90 °C	UL
SF-0603HI-F		200 % I _F in 60 sec.	0.5 A 35 VDC 4 A	-55 °C to +90 °C	UL
SF-0603F		200 % I _F in 60 sec.	0.4 A 32/50 VDC 4 A	-20 °C to +105 °C	UL
SF-0603FP		200 % I _F in 5 sec.	0.5 A 32/50 VDC 5 A	-20 °C to +105 °C	UL
SF-0603S		250 % I _F in 5 sec.	0.4 A 32/50 VDC 6 A	-20 °C to +105 °C	UL
SF-0603SP		200 % I _F in 1 – 120 sec.	0.5 A 32/50 VDC 6 A	-20 °C to +105 °C	UL
SF-0603SP-R		200 % I _F in 1 – 120 sec.	1 A 50/63 VDC 8 A	-55 °C to +125 °C	UL
SF-0603FP-M		200 % I _F in 5 sec.	0.5 A 32 VDC 5 A	-55 °C to +125 °C	UL
SF-0603HI-M		200 % I _F in 60 sec.	1 A 32 VDC 8 A	-55 °C to +125 °C	UL
SF-0603S-M		250 % I _F in 5 sec.	0.5 A 24/32/63 VDC 6 A	-55 °C to +125 °C	UL
SF-0603SP-M		200 % I _F in 1 – 120 sec.	1 A 32 VDC 8 A	-55 °C to +125 °C	UL

General Purpose Singlfuse™ SMD Fuses







1206 FOOTPRINT

Model Series	Photo	Fusing Characteristic	Rated Current/Voltage	Rated Temperature	Agency Recognition
SF-1206F		200 % I _F in 60 sec.	0.5 A 32/63 VDC 7 A	-20 °C to +105 °C	UL
SF-1206FP		200 % I _F in 5 sec.	0.5 A 32/63 VDC 7 A	-20 °C to +105 °C	UL
SF-1206S		250 % I _F in 5 sec.	0.5 A 32/63 VDC 7 A	-20 °C to +105 °C	UL
SF-1206SP		200 % I _F in 1 – 120 sec.	0.5 A 32/63 VDC 7 A	-20 °C to +105 °C	UL
SF-1206S-R		250 % I _n in 5 sec.	10 A 32 VDC 20 A	-55 to +125 °C	UL
SF-1206HH-R		350 % I _n in 1 sec.	8 A 50 VDC 30 A	-55 to +150 °C	UL






Model Series	Photo	Fusing Characteristic	Rated Current/Voltage	Rated Temperature	Agency Recognition
SF-1206F-M		200 % I _F in 60 sec.	2.5 A 48/65 VDC 8 A	-55 °C to +125 °C	UL
SF-1206HI-M		200 % I _r in 60 sec.	0.5 A 24/32/63 VDC 8 A	-55 °C to +125 °C	UL
SF-1206S-M		250 % I _F in 5 sec.	0.5 A 24/32/63 VDC 8 A	-55 °C to +125 °C	UL
SF-1206SP-M		200 % I _F in 1 – 120 sec.	1 A 24/32/63 VDC 8 A	-55 °C to +125 °C	UL
SF-1206HH-M		350 % I _F in 5 sec.	10 A 24 VDC 30 A	-55 °C to +125 °C	UL
SF-1206HV-M		350 % I _F in 5 sec.	10 A 35 VDC 40 A	-55 °C to +125 °C	UL
SF-1206S-W		250 % I _F in 5 sec.	1.5 A 32/65 VDC 15 A	-55 °C to +125 °C	UL / TÜV

General Purpose Singlfuse™ SMD Fuses


2410 FOOTPRINT

Model Series	Photo	Fusing Characteristic	Rated Current/Voltage	Rated Temperature	Agency Recognition
SF-2410FP-W		200 % I _F in 5 sec.	0.5 A 125 VDC – 125/250VAC 10 A	–55 °C to +125 °C	UL / TÜV
SF-2410F-W		200 % I _F in 20 sec.	12 A 65 VDC – VAC 20 A	–55 °C to +125 °C	UL
SF-2410SP-W		200 % I _F in 1 – 120 sec.	0.5 A 250 VAC 2 A	–55 °C to +125 °C	UL / VDE
SF-2410FP-T		200 % I _F in 5 sec.	62 mA 125 VAC 10 A	–55 °C to +125 °C	UL
SF-2410F-T		200 % I _F in 60 sec.	12 A 65/86 VDC – VAC 25 A	–55 °C to +125 °C	UL
SF-2410HI-T		200 % I _F in 60 sec.	0.375 A 125 VAC 7 A	–55 °C to +125 °C	UL

3812 FOOTPRINT

Model Series	Photo	Fusing Characteristic	Rated Current/Voltage	Rated Temperature	Agency Recognition
SF-3812FG-T		200 % I _F in 60 sec.	20 A 125 VAC 30 A	–55 °C to +125 °C	UL
SF-3812TL-T		250 % I _F in 120 sec.	0.5 A 250 VAC 5 A	–55 °C to +125 °C	UL / TÜV
SF-3812SP-T		200 % I _F in 120 sec.	1.25 A 250 VAC	–55 °C to +125 °C	UL / TÜV
SF-3812F-T		200 % I _F in 60 sec.	10 A 250 VAC 60 A	–55 °C to +125 °C	UL
SF-3812TM-T		250 % I _F in 1 – 120 sec.	0.5 A 600 VAC 2 A	–55 °C to +125 °C	UL

2923 FOOTPRINT

Model Series	Photo	Fusing Characteristic	Rated Current/Voltage	Rated Temperature	Agency Recognition
SF-2923HC-C		250 % I _F in 60 sec.	20 A 60 VDC 50 A	–55 °C to +125 °C	UL

Auto-Grade* Singlfuse™ SMD Fuses



0603 FOOTPRINT

Model Series	Photo	Fusing Characteristic	Rated Current/Voltage	Rated Temperature	Agency Recognition
SF-0603SPA-R		200 % I _r in 1 – 120 sec.	1 A 50/63 VDC 8 A	–55 °C to +150 °C	UL / TÜV
SF-0603HIA-M		200 % I _r in 1 – 60 sec.	1 A 32 VDC 5 A	–55 °C to +125 °C	UL
SF-0603SA-M		250 % I _r in 5 sec.	0.5 A 24/32/65 VDC 8 A	–55 °C to +150 °C	UL

1206 FOOTPRINT

Model Series	Photo	Fusing Characteristic	Rated Current/Voltage	Rated Temperature	Agency Recognition
SF-1206SA-R		250 % I _r in 5 sec.	10 A 32 VDC 20 A	–55 °C to +150 °C	UL
SF-1206HHA-R		350 % I _r in 1 sec.	8 A 50 VDC 30 A	–55 °C to +125 °C	UL
SF-1206HIA-M		200 % I _r in 60 sec.	0.5 A 24/32/65 VDC 6 A	–55 °C to +150 °C	UL
SF-1206SA-M		250 % I _r in 5 sec.	0.5 A 65 VDC 5 A	–55 °C to +150 °C	UL
SF-1206SA-W		250 % I _r in 5 sec.	1.5 A 32/65/110 VDC 15 A	–55 °C to +125 °C	UL

2410 FOOTPRINT

Model Series	Photo	Fusing Characteristic	Rated Current/Voltage	Rated Temperature	Agency Recognition
SF-2410FPA-W		200 % I _r in 5 sec.	0.5 A 125/250 VAC 10 A	–55 °C to +125 °C	UL
SF-2410FA-W		200 % I _r in 20 sec.	12 A 65 VDC 20 A	–55 °C to +125 °C	UL

*Meets Bourns' internal AEC-Q200 equivalent test plan.

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