



## SinglFuse™ SF-3812F-T Series Features

- Single blow fuse for overcurrent protection
- EIA 3812 (10030 metric) footprint
- Ceramic tube design for fast acting fusing speed applications
- UL 248-14 listed
- Surface mount packaging for automated assembly
- RoHS compliant\* and halogen free\*\*

## SF-3812F-T Series – Fast Acting SMD Fuses

### Electrical Characteristics

Model	Rated Current (A)	Fusing Time	Resistance (Ω) Typ.***	Rated Voltage	Interrupting Rating	Typical I <sup>2</sup> t (A <sup>2</sup> s)****	Certifications
							cUL
							E198545
SF-3812F1000T-2	10	Open within 60 sec. at 200 % rated current	0.0067	250 VAC	100 A @ 250 VAC 150 A @ 125 VAC 130 A @ 80 VDC 300 A @ 72 VDC	75	✓
SF-3812F1500T-2	15		0.0050			141.75	✓
SF-3812F2000T-2	20		0.0030			356	✓
SF-3812F2500T-2	25		0.0024			625	✓
SF-3812F3000T-2	30		0.0018			900	✓
SF-3812F3500T-2	35		0.0014			1320	✓

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

\*\*\*\* Melting I<sup>2</sup>t calculated at 10 times rated current.

### 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



**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://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.

"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-3812F-T Series Applications

- Battery Management Systems
- Blade Computing
- PC Servers
- POE, POE+
- Voltage Regulator Modules
- Power Supplies
- Advanced Telecommunication Computing Architecture (ATCA) Applications

## SF-3812F-T Series – Fast Acting 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

### Typical Part Marking

Represents total content. Layout may vary.



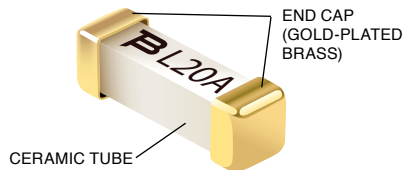
Rated Current	Part Marking
10 A	L 10 A
15 A	L 15 A
20 A	L 20 A
25 A	L 25 A
30 A	L 30 A
35 A	L 35 A

### How to Order

**SF - 3812 F 1000 T - 2**

SinglFuse™ \_\_\_\_\_  
 Product Designator \_\_\_\_\_  
 SMD Footprint \_\_\_\_\_  
     3812 = EIA 3812  
     (10030 metric) \_\_\_\_\_  
 Fuse Blow Type \_\_\_\_\_  
     F = Fast Acting \_\_\_\_\_  
 Rated Current \_\_\_\_\_  
     1000 ~ 3500 (10 A ~ 35 A) \_\_\_\_\_  
 Structure Type \_\_\_\_\_  
     T = Ceramic Tube \_\_\_\_\_  
 Packaging Type \_\_\_\_\_  
     - 2 = Tape & Reel \_\_\_\_\_

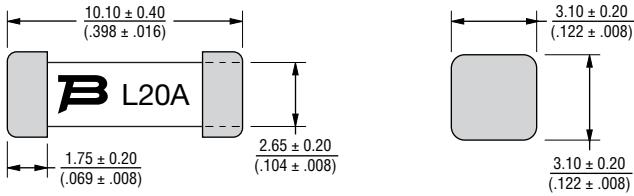
### Construction



### Packaging Quantity

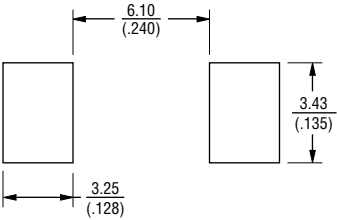
2,500 pieces per 13-inch reel

### Product Dimensions



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

### Recommended Pad Layout



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

### Agency Recognition

UL File Number ..... [E198545](#)

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