



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

- Single blow fuse for overcurrent protection
- EIA 3812 (10030 metric) footprint
- Ceramic tube design for time lag fusing speed and low power applications
- UL 248-14 listed
- Meets IEC 60127-1 and IEC 60127-7 requirements
- Surface mount packaging for automated assembly
- RoHS compliant\* and halogen free\*\*

## SF-3812TL-T Series – Time Lag & Low Power 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	
							UL	TUV
SF-3812TL050T-2	0.5	Open within 120 sec. at 250 % rated current	0.5479	250 VAC	50 A @ 250 VAC	1.963	•	<i>pending</i>
SF-3812TL075T-2	0.75		0.26			3.375	•	<i>pending</i>
SF-3812TL100T-2	1		0.18			11.22	•	•
SF-3812TL150T-2	1.5		0.1027			14.85	•	•
SF-3812TL200T-2	2		0.0504			19.84	•	•
SF-3812TL250T-2	2.5		0.037			20.5	•	•
SF-3812TL300T-2	3		0.028			54	•	•
SF-3812TL350T-2	3.5		0.0199			57.82	•	•
SF-3812TL400T-2	4		0.0158			125.6	•	•
SF-3812TL500T-2	5		0.012			185	•	•

\*\*\* 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 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](http://www.bourns.com/docs/legal/disclaimer.pdf).

# SinglFuse™ SF-3812TL-T Series Applications

- Lighting systems
- Power adaptors
- Power supplies
- AC/DC converters
- Telecom equipment system power

## SF-3812TL-T Series – Time Lag & Low Power 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

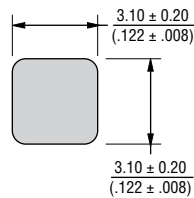
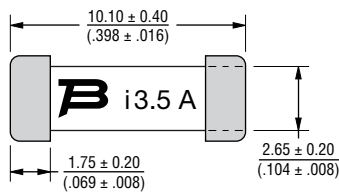
### Typical Part Marking

Represents total content. Layout may vary.



Rated Current	Part Marking
0.50 A	i 0.5 A
0.75 A	i 0.75 A
1.00 A	i 1 A
1.50 A	i 1.5 A
2.00 A	i 2 A
2.50 A	i 2.5 A
3.00 A	i 3 A
3.50 A	i 3.5 A
4.00 A	i 4 A
5.00 A	i 5 A

### Product Dimensions

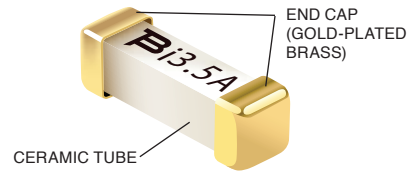


DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

### Agency Recognition

UL File Number ..... E198545  
 TUV File Number..... R 50421699

### Construction



### Packaging Quantity

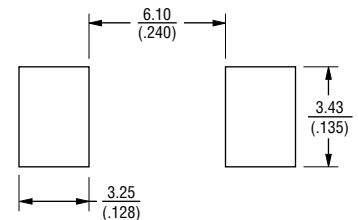
2,500 pieces per 13-inch reel

### How to Order

**SF - 3812 TL 050 T - 2**

SinglFuse™ \_\_\_\_\_  
 Product Designator \_\_\_\_\_  
 SMD Footprint \_\_\_\_\_  
     3812 = EIA 3812  
     (10030 metric)  
 Fuse Blow Type \_\_\_\_\_  
     TL = Time Lag & Low Power  
 Rated Current \_\_\_\_\_  
     050 - 500 (0.50 A ~ 5.00 A)  
 Structure Type \_\_\_\_\_  
     T = Ceramic Tube  
 Packaging Type \_\_\_\_\_  
     - 2 = Tape & Reel

### Recommended Pad Layout



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

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](http://www.bourns.com/docs/legal/disclaimer.pdf).