



SinglFuse™ SF-3812TM-T Series Features

- Replacement for Bourns® Telefuse™ models B0500T, B1250T and B2000T
- For use in telecommunication circuit applications requiring low current protection with high surge tolerance
- Overcurrent protection to Telcordia GR-1089-CORE Issue 4 & UL 60950
- EIA 3812 (10030 metric) footprint
- UL 248-14 listed
- Surface mount packaging for automated assembly
- RoHS compliant* and halogen free**

SF-3812TM-T Series – SinglFuse™ Telefuse™ Telecom Protectors

Electrical Characteristics

Model	Rated Current (Amps)	Fusing Time	Resistance (Ω) Typ.***	Rated Voltage	Interrupting Rating	Typical I^2t (A ² s) ****	Max. Power Dissipation (W)
SF-3812TM050T-2	0.50	Open within 1~120 sec. at 250 % rated current	0.480	600 VAC	60 A @ 600 VAC	1.4	0.4
SF-3812TM125T-2	1.25		0.100		60 A @ 250 VAC	22	0.6
SF-3812TM200T-2	2.00		0.055		50 A @ 250 VDC 100 A @ 125 VDC	24	0.8

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

**** Melting I^2t calculated at 10 times rated current.

Reliability Testing

No.	Test	Test Condition	Requirement	Test Reference
1	Solderability	Temperature setup: 235 $\pm$ 5 °C Time setup: 10 $\pm$ 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 $\pm$ 5 °C Time setup: 30 $\pm$ 5 sec.	DCR change $\leq \pm 15$ %	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 $\leq \pm 15$ % No mechanical damage	MIL-STD-202G Method 107G Test Condition B
4	Humidity unload	Heat (85 $\pm$ 0.5 °C) High Humidity (85 $\pm$ 1 % RH) 240 hours	DCR change $\leq \pm 15$ % No mechanical damage	MIL-STD-202G Method 103B Test Condition A
5	Salt spray	Salt spray concentration: 5 $\pm$ 1 % Test liquid temperature: 35 $\pm$ 0.5 °C 96 hours	DCR change $\leq \pm 15$ % 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 $\leq \pm 15$ %	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 $\leq \pm 15$ % No mechanical damage	MIL-STD-202G Method 201A

Agency Recognition

UL File NumberE198545

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WARNING Cancer and Reproductive Harm

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.

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-3812TM-T Series Applications

- Telecom and networking equipment surge protection
- T1/E1/J1
- 10/100/1000BaseT Ethernet
- xDSL (VDSL/VDSL2+, ADSL/ADSL2+)
- Fiber to the Curb (FTTC) SLIC
- Fiber to the Premises (FTTP) SLIC
- POTS systems

SF-3812TM-T Series – SinglFuse™ Telefuse™ Telecom Protectors

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.



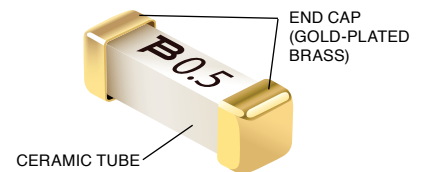
Rated Current	Part Marking
0.5 A	0.5
1.25 A	1.25
2.0 A	2.0

How to Order

SF - 3812 TM 050 T - 2

SinglFuse™ _____
 Product Designator _____
 SMD Footprint _____
 3812 = EIA 3812
 (10030 metric) _____
 Fuse Blow Type _____
 TM = Time Lag, Telecom _____
 Rated Current _____
 050 ~ 200 (0.50 A ~ 2.00 A) _____
 Structure Type _____
 T = Ceramic Tube _____
 Packaging Type _____
 - 2 = Tape & Reel

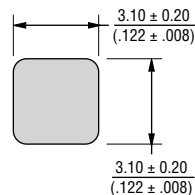
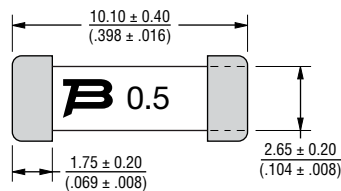
Construction



Packaging Quantity

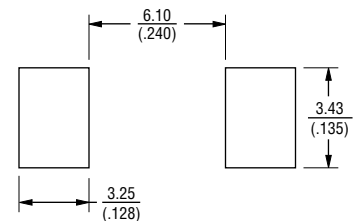
2,500 pieces per 13-inch reel

Product Dimensions



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

Recommended Pad Layout



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

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