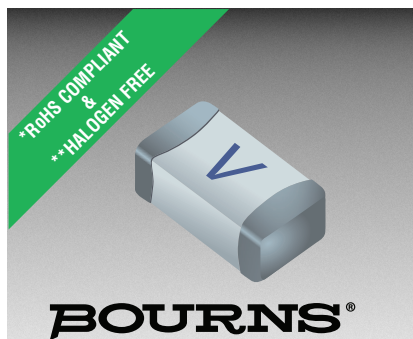




## SinglFuse™ SF-1206HVxxM Series Features

- Single blow fuse for overcurrent protection
- 3216 (EIA 1206) footprint
- High voltage rating applications
- High current rating applications
- UL 248-14 listed
- RoHS compliant\* and halogen free\*\*
- Multilayer SMD design
- Surface mount packaging for automated assembly

### SF-1206HVxxM Series - High Voltage & High Current Multilayer Surface Mount Fuses

#### Electrical Characteristics

| Model          | Rated Current (Amps) | Fusing Time                               | Resistance (Ω) Typ.*** | Rated Voltage | Interrupting Rating | Typical I <sup>2</sup> t (A <sup>2</sup> s) **** |
|----------------|----------------------|-------------------------------------------|------------------------|---------------|---------------------|--------------------------------------------------|
| SF-1206HV10M-2 | 10.0                 | Open within 5 sec. at 350 % rated current | 0.0055                 | DC 35 V       | DC 35 V 150 A       | 15.0                                             |
| SF-1206HV12M-2 | 12.0                 |                                           | 0.0045                 |               |                     | 20.0                                             |
| SF-1206HV15M-2 | 15.0                 |                                           | 0.0032                 |               |                     | 35.0                                             |
| SF-1206HV20M-2 | 20.0                 |                                           | 0.0023                 |               |                     | 80.0                                             |
| SF-1206HV25M-2 | 25.0                 |                                           | 0.0016                 |               | DC 35 V 200A        | 120.0                                            |
| SF-1206HV30M-2 | 30.0                 |                                           | 0.0012                 |               | DC 35 V 200 A       | 180.0                                            |
| SF-1206HV40M-2 | 40.0                 |                                           | 0.0009                 |               | DC 26 V 300 A       | 240.0                                            |

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

\*\*\*\* Melting I<sup>2</sup>t calculated at 1000 % of current rating.

#### Reliability Testing

| No. | Test                      | Requirement                                                                                           | Test Condition                                                                                            | Test Reference         |
|-----|---------------------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------|
| 1   | Solderability             | Minimum 95 % coverage                                                                                 | One dip at 245 °C for 5 seconds                                                                           | MIL-STD-202 Method 208 |
| 2   | Soldering heat resistance | DCR change ≤ 10 %<br>No mechanical damage                                                             | One dip at 260 °C for 60 seconds                                                                          | MIL-STD-202 Method 210 |
| 3   | Moisture resistance       | DCR change ≤ ±15 %<br>No excessive corrosion                                                          | 10 cycles                                                                                                 | MIL-STD-202 Method 106 |
| 4   | Salt spray                | DCR change ≤ ±10 %<br>No excessive corrosion                                                          | 48 hour exposure, 5 % salt solution                                                                       | MIL-STD-202 Method 101 |
| 5   | Mechanical vibration      | DCR change ≤ ±10 %<br>No mechanical damage                                                            | 0.4 inch D.A. or 30 G between 5-3000 Hz                                                                   | MIL-STD-202 Method 204 |
| 6   | Mechanical shock          | DCR change ≤ ±10 %<br>No mechanical damage                                                            | 1500 G, 0.5 ms, half-sine shocks                                                                          | MIL-STD-202 Method 213 |
| 7   | Thermal Shock             | DCR change ≤ ±10 %<br>No mechanical damage                                                            | 100 cycles between -65 °C and +125 °C                                                                     | MIL-STD-202 Method 107 |
| 8   | Life                      | No electrical "opens" during testing<br>Voltage drop change shall be less than ±20 % of initial value | 80 % rated current (75 % for < 1 A fuses) for 2000 hours at ambient temperature between +20 °C and +30 °C | Refer to STP document  |

#### 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](#)

## BOURNS®

**Asia-Pacific:** Tel: +886-2 2562-4117 • Email: [asiacus@bourns.com](mailto:asiacus@bourns.com)

**EMEA:** Tel: +36 88 520 390 • Email: [eurocus@bourns.com](mailto:eurocus@bourns.com)

**The Americas:** Tel: +1-951 781-5500 • Email: [americus@bourns.com](mailto:americus@bourns.com)

[www.bourns.com](http://www.bourns.com)

\* 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-1206HVxxM 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-1206HVxxM Series - High Voltage & High Current Multilayer Surface Mount Fuses

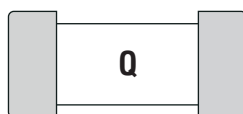
**BOURNS®**

#### Environmental Characteristics

|                                  |                                 |
|----------------------------------|---------------------------------|
| Operating Temperature.....       | -55 °C to +150 °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.



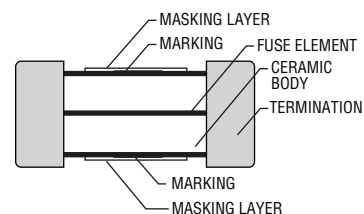
RATED CURRENT (A)  
 Q = 10.0    S = 25.0  
 X = 12.0    V = 30.0  
 Y = 15.0    O = 40.0  
 Z = 20.0

#### How to Order

**SF - 1206 HV 10 M - 2**

SinglFuse™  
 Product Designator  
 SMD Footprint  
 1206 = 3216 (EIA 1206) size  
 Fuse Blow Type  
 HV = High Voltage & High Current  
 Rated Current  
 10 ~ 40 (10.0 A ~ 40.0 A)  
 Structure Type  
 M = Multilayer  
 Packaging Type  
 - 2 = Tape & Reel

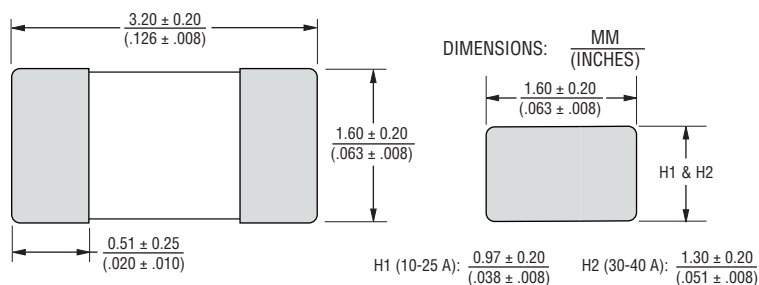
#### Construction



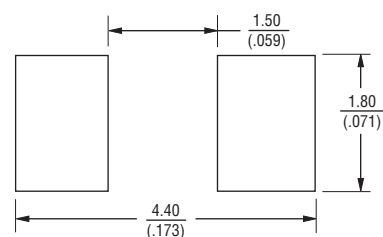
#### Packaging Quantity

3,000 pieces per 7-inch reel

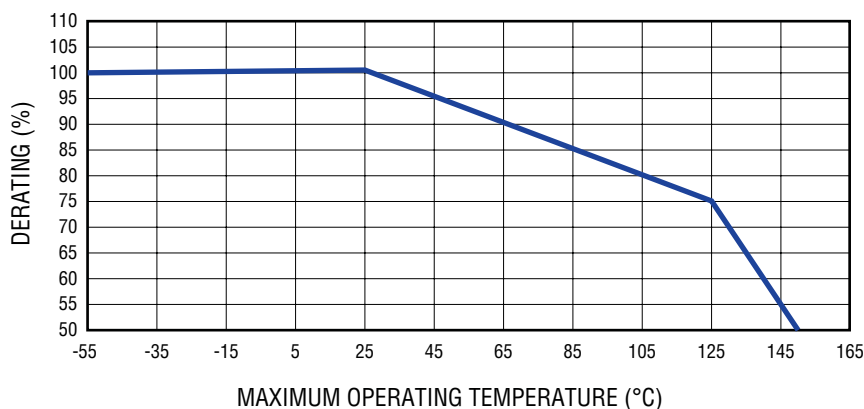
#### Product Dimensions



#### Recommended Pad Layout



#### Current Rating Thermal Derating Curve



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