

# ANTREX Electronics

## Electronic Components Sourcing Information

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### Product Reference Information

|                      |                                             |
|----------------------|---------------------------------------------|
| <b>Part Number:</b>  | SF-1206HHA2000R-2                           |
| <b>Manufacturer:</b> | Bourns Inc.                                 |
| <b>Package:</b>      | Tape & Reel (TR), Cut Tape (CT), Digi-Reel® |
| <b>Availability:</b> | Please confirm with sales                   |

#### Product Page:

<https://antrexco.com/product/details/bourns-inc/sf-1206hha2000r-2.html>

#### Request a Quote:

[Submit RFQ for this part](#)



Scan for product page

### Contact Information

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### Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

#### Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.



## SinglFuse™ SF-1206HHA-R Series Features

- Metal foil chip design for overcurrent protection
- EIA 1206 (3216 metric) footprint
- Small chip size with high rating current up to 30 A
- AEC-Q200 (Grade 1) compliant\*
- UL 248 compliant
- RoHS compliant\*\* and halogen free\*\*\*

## SF-1206HHA-R Series - Automotive Grade SMD Fuses

### Clearing Time Characteristics for Series

| % of Current Rating | Clearing Time at 25 °C |           |
|---------------------|------------------------|-----------|
|                     | Min.                   | Max.      |
| 100 %               | 4 hours                | —         |
| 250 % (8~20 A)      | —                      | 5 seconds |
| 350 % (8~30 A)      | —                      | 1 second  |

### Additional Information

Click these links for more information:



[PRODUCT SELECTOR](#) [TECHNICAL LIBRARY](#) [INVENTORY](#) [SAMPLES](#) [CONTACT](#)

### Electrical Characteristics

| Model             | Rated Current (A) | Resistance (Ω) Typ.**** | Rated Voltage    | Interrupting Rating              | Typical I <sup>2</sup> t (A <sup>2</sup> s) ***** | Agency Recognition           |
|-------------------|-------------------|-------------------------|------------------|----------------------------------|---------------------------------------------------|------------------------------|
|                   |                   |                         |                  |                                  |                                                   | cUL: <a href="#">E198545</a> |
| SF-1206HHA800R-2  | 8                 | 0.0045                  | 50 VDC<br>50 VAC | 100 A @ 50 VDC<br>100 A @ 50 VAC | 18.4                                              | ✓                            |
| SF-1206HHA1000R-2 | 10                | 0.0040                  |                  |                                  | 29.1                                              | ✓                            |
| SF-1206HHA1200R-2 | 12                | 0.0032                  |                  |                                  | 44.0                                              | ✓                            |
| SF-1206HHA1500R-2 | 15                | 0.0026                  |                  |                                  | 77.0                                              | ✓                            |
| SF-1206HHA2000R-2 | 20                | 0.00215                 |                  |                                  | 105.6                                             | ✓                            |
| SF-1206HHA2500R-2 | 25                | 0.0013                  |                  | 200 A @ 50 VDC<br>200 A @ 50 VAC | 171.7                                             | ✓                            |
| SF-1206HHA3000R-2 | 30                | 0.0010                  |                  |                                  | 280.2                                             | ✓                            |

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

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

### Environmental Characteristics

|                                 |                   |
|---------------------------------|-------------------|
| Operating Temperature.....      | -55 °C to +125 °C |
| Storage Conditions              |                   |
| Temperature .....               | +5 °C to +35 °C   |
| Humidity.....                   | 40 % to 75 %      |
| Moisture Sensitivity Level..... | 1                 |
| ESD Classification (HBM).....   | Class 6           |

# BOURNS®

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

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

\*\* 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.

Users should verify actual device performance in their specific applications.

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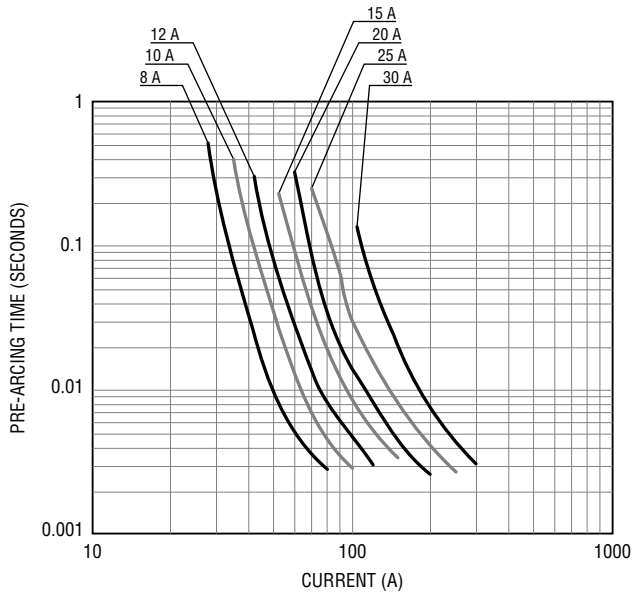


**WARNING Cancer  
and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

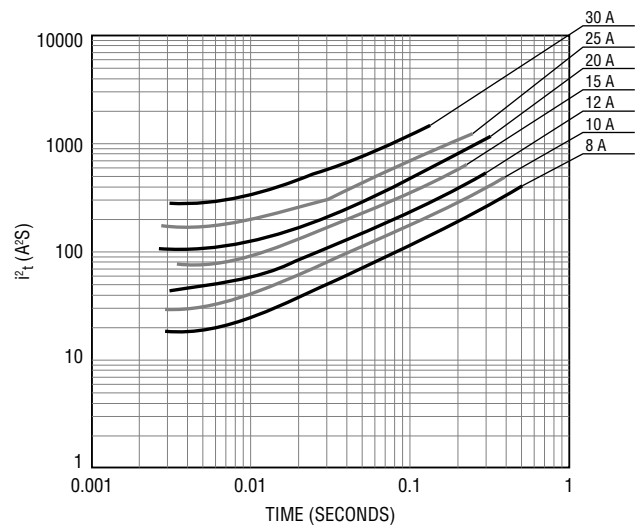
# SF-1206HHA-R Series – Automotive Grade SMD Fuses

**BOURNS®**

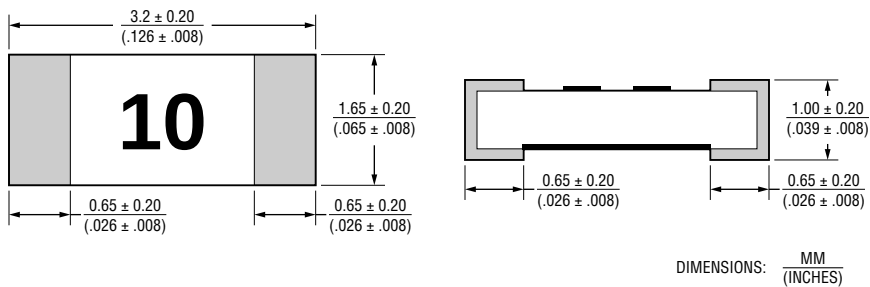
**Average Pre-Arcing Time vs. Current Curves**



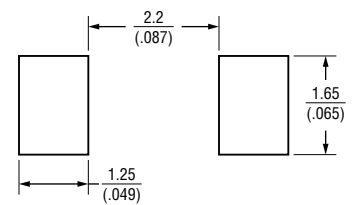
**Average  $I^2t$  vs.  $t$  Curves**



**Product Dimensions**



**Recommended Pad Layout**



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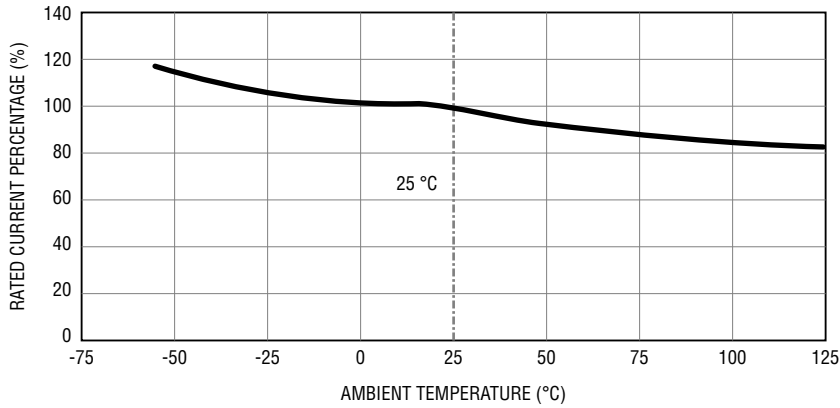
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# SF-1206HHA-R Series – Automotive Grade SMD Fuses

**BOURNS®**

## Current Rating Thermal Derating Curve



## How to Order

**SF - 1206 HH A 1000 R - 2**

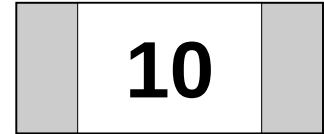
SinglFuse™ \_\_\_\_\_  
 Product Designator \_\_\_\_\_  
 SMD Footprint \_\_\_\_\_  
 1206 = EIA 1206 (3216 metric) size  
 Fusing Characteristic \_\_\_\_\_  
 HH = 1 sec. max. @ 350 % I<sub>n</sub>  
 Automotive Grade \_\_\_\_\_  
 Rated Current \_\_\_\_\_  
 800 ~ 3000 = 8 A ~ 30 A  
 Structure Type \_\_\_\_\_  
 R = Metal Foil  
 Packaging Type \_\_\_\_\_  
 2 = Tape & Reel (3,000 pcs./reel)

## Packaging

|                |                      |
|----------------|----------------------|
| Reel Dimension | 7-inch Tape and Reel |
| Specification  | EIA 481-2            |
| Quantity       | 3,000 pieces         |
| Packaging Code | -2                   |

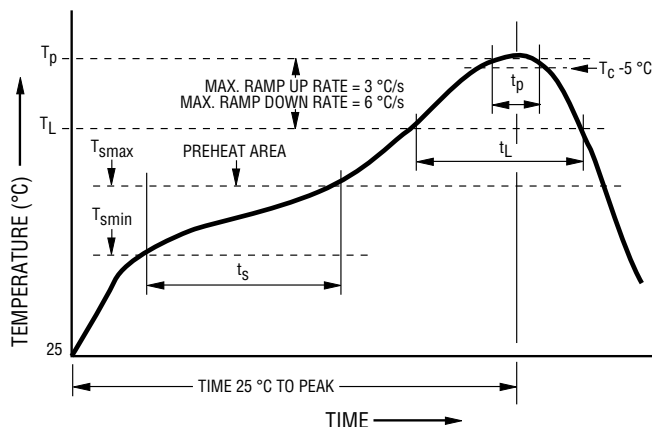
## Typical Part Marking

Represents total content. Layout may vary. Markings in black color.



| Rated Current | Part Marking | Rated Current | Part Marking |
|---------------|--------------|---------------|--------------|
| 8 A           | 8            | 20 A          | 20           |
| 10 A          | 10           | 25 A          | 25           |
| 12 A          | 12           | 30 A          | 30           |
| 15 A          | 15           |               |              |

## Solder Reflow Recommendations



| Profile Feature                                                                                                                                                            | Pb-Free Assembly                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Preheat / Soak:<br>Temperature Min. (T <sub>smin</sub> )<br>Temperature Max. (T <sub>smax</sub> )<br>Time (t <sub>s</sub> ) from (T <sub>smin</sub> to T <sub>smax</sub> ) | 150 °C<br>200 °C<br>60~120 seconds |
| Ramp Up Rate (T <sub>L</sub> to T <sub>p</sub> )                                                                                                                           | 3 °C / second max.                 |
| Liquidous Temperature (T <sub>L</sub> )<br>Time (t <sub>L</sub> ) maintained above T <sub>L</sub>                                                                          | 217 °C<br>60~150 seconds           |
| Peak Package Body Temperature (T <sub>p</sub> )                                                                                                                            | 260 °C                             |
| Time (t <sub>p</sub> )* within 5 °C of the specified classification temperature (T <sub>c</sub> )                                                                          | 30 seconds*                        |
| Ramp Down Rate (T <sub>p</sub> to T <sub>L</sub> )                                                                                                                         | 6 °C / second max.                 |
| Time 25 °C to Peak Temperature                                                                                                                                             | 8 minutes max.                     |

REV. 07/23

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\*Tolerance for peak profile temperature (T<sub>p</sub>) is defined as a supplier minimum and a user maximum.

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