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***

additional information

Click these links for more information:

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TECHNICAL LIBRARY
INVENTORY
SAMPLES
CONTACT

Clearing Time Characteristics for Series

<table>
<thead>
<tr>
<th>% of Current Rating</th>
<th>Clearing Time at 25 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
</tr>
<tr>
<td>100 %</td>
<td>4 hours</td>
</tr>
<tr>
<td>250 % (8–20 A)</td>
<td>—</td>
</tr>
<tr>
<td>350 % (8–30 A)</td>
<td>—</td>
</tr>
</tbody>
</table>

Electrical Characteristics

<table>
<thead>
<tr>
<th>Model</th>
<th>Rated Current (A)</th>
<th>Resistance (Ω) Typ.****</th>
<th>Rated Voltage</th>
<th>Interrupting Rating</th>
<th>Typical I2t (A²s) *****</th>
<th>Agency Recognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF-1206HHA800R-2</td>
<td>8</td>
<td>0.0045</td>
<td></td>
<td></td>
<td>18.4</td>
<td>✓</td>
</tr>
<tr>
<td>SF-1206HHA1000R-2</td>
<td>10</td>
<td>0.0040</td>
<td></td>
<td></td>
<td>29.1</td>
<td>✓</td>
</tr>
<tr>
<td>SF-1206HHA1200R-2</td>
<td>12</td>
<td>0.0032</td>
<td></td>
<td>50 VDC</td>
<td>44.0</td>
<td>✓</td>
</tr>
<tr>
<td>SF-1206HHA1500R-2</td>
<td>15</td>
<td>0.0026</td>
<td></td>
<td>100 A @ 50 VDC</td>
<td>77.0</td>
<td>✓</td>
</tr>
<tr>
<td>SF-1206HHA2000R-2</td>
<td>20</td>
<td>0.00215</td>
<td></td>
<td>200 A @ 50 VDC</td>
<td>105.6</td>
<td>✓</td>
</tr>
<tr>
<td>SF-1206HHA2500R-2</td>
<td>25</td>
<td>0.0013</td>
<td></td>
<td></td>
<td>171.7</td>
<td>✓</td>
</tr>
<tr>
<td>SF-1206HHA3000R-2</td>
<td>30</td>
<td>0.0010</td>
<td></td>
<td></td>
<td>280.2</td>
<td>✓</td>
</tr>
</tbody>
</table>

**** Resistance value measured with ≤10 % rated current at 25 °C ambient. Tolerance ± 25 %.
***** Melting I²t 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

Bourne's

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* Meets Bourne's internal AEC-Q200 equivalent test plan.
*** Bourne's 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.

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

Average Pre-Arcing Time vs. Current Curves

Average I^2t vs. t Curves

Product Dimensions

Recommended Pad Layout

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

Current Rating Thermal Derating Curve

<table>
<thead>
<tr>
<th>AMBIENT TEMPERATURE (°C)</th>
<th>RATED CURRENT PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>100</td>
</tr>
<tr>
<td>50</td>
<td>80</td>
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<tr>
<td>75</td>
<td>60</td>
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<td>125</td>
<td>20</td>
</tr>
<tr>
<td>140</td>
<td>0</td>
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</tbody>
</table>

Packaging

<table>
<thead>
<tr>
<th>Specification</th>
<th>EIA 481-2</th>
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<tbody>
<tr>
<td>Quantity</td>
<td>3,000 pcs</td>
</tr>
<tr>
<td>Packaging Code</td>
<td>-2</td>
</tr>
</tbody>
</table>

Typical Part Marking

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

How to Order

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

Solder Reflow Recommendations

Profile Feature
Preheat / Soak:
Temperature Min. (Tₘᵢₙᵢₙ) 150 °C
Temperature Max. (Tₘₐₓₜₜ) 200 °C
Time (tₛ) from (Tₘᵢₙᵢₙ to Tₘₐₓₜₜ) 60–120 seconds
Ramp Up Rate (Tₘᵢₙ to Tₔ) 3 °C / second max.
Liquidous Temperature (Tₗ) 217 °C
Time (tₗ) maintained above Tₗ 60–150 seconds
Peak Package Body Temperature (Tₔ) 260 °C
Time (tₔ) within 5 °C of the specified classification temperature (Tₕₚ) 30 seconds*
Ramp Down Rate (Tₔ to Tₗ) 6 °C / second max.
Time 25 °C to Peak Temperature 8 minutes max.

Tolerance* for peak profile temperature (Tₔ) is defined as a supplier minimum and a user maximum.

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