SRR0745HA Series - Shielded Power Inductors

**Features**
- Shielded construction – low radiation
- Wide operating temperature range
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

**Applications**
- DC-DC converters
- Power supplies in automotive, consumer, industrial, and telecom electronics

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**Electrical Specifications @ 25 °C**

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance @ 1 KHz / 1 V</th>
<th>DCR (Ω) Max.</th>
<th>Irms (A) Typ.</th>
<th>Isat (A) Typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRR0745HA-100M</td>
<td>10.0 ±20</td>
<td>0.052</td>
<td>2.10</td>
<td>2.50</td>
</tr>
<tr>
<td>SRR0745HA-120M</td>
<td>12.0 ±20</td>
<td>0.062</td>
<td>2.00</td>
<td>2.30</td>
</tr>
<tr>
<td>SRR0745HA-150M</td>
<td>15.0 ±20</td>
<td>0.075</td>
<td>1.90</td>
<td>2.10</td>
</tr>
<tr>
<td>SRR0745HA-180M</td>
<td>18.0 ±20</td>
<td>0.090</td>
<td>1.80</td>
<td>1.95</td>
</tr>
<tr>
<td>SRR0745HA-220M</td>
<td>22.0 ±20</td>
<td>0.096</td>
<td>1.65</td>
<td>1.75</td>
</tr>
<tr>
<td>SRR0745HA-270M</td>
<td>27.0 ±20</td>
<td>0.130</td>
<td>1.45</td>
<td>1.62</td>
</tr>
<tr>
<td>SRR0745HA-330M</td>
<td>33.0 ±20</td>
<td>0.150</td>
<td>1.35</td>
<td>1.45</td>
</tr>
<tr>
<td>SRR0745HA-390M</td>
<td>39.0 ±20</td>
<td>0.190</td>
<td>1.17</td>
<td>1.30</td>
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<tr>
<td>SRR0745HA-470M</td>
<td>47.0 ±20</td>
<td>0.210</td>
<td>1.05</td>
<td>1.20</td>
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<tr>
<td>SRR0745HA-560M</td>
<td>56.0 ±20</td>
<td>0.240</td>
<td>0.95</td>
<td>1.10</td>
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<tr>
<td>SRR0745HA-680M</td>
<td>68.0 ±20</td>
<td>0.300</td>
<td>0.86</td>
<td>0.96</td>
</tr>
<tr>
<td>SRR0745HA-820M</td>
<td>82.0 ±20</td>
<td>0.400</td>
<td>0.78</td>
<td>0.90</td>
</tr>
<tr>
<td>SRR0745HA-101M</td>
<td>100.0 ±20</td>
<td>0.450</td>
<td>0.70</td>
<td>0.78</td>
</tr>
<tr>
<td>SRR0745HA-121M</td>
<td>120.0 ±20</td>
<td>0.550</td>
<td>0.60</td>
<td>0.70</td>
</tr>
<tr>
<td>SRR0745HA-151M</td>
<td>150.0 ±20</td>
<td>0.760</td>
<td>0.48</td>
<td>0.58</td>
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<tr>
<td>SRR0745HA-181M</td>
<td>180.0 ±20</td>
<td>0.820</td>
<td>0.46</td>
<td>0.54</td>
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<tr>
<td>SRR0745HA-221M</td>
<td>220.0 ±20</td>
<td>0.950</td>
<td>0.42</td>
<td>0.50</td>
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<tr>
<td>SRR0745HA-271M</td>
<td>270.0 ±20</td>
<td>1.200</td>
<td>0.38</td>
<td>0.46</td>
</tr>
<tr>
<td>SRR0745HA-331M</td>
<td>330.0 ±20</td>
<td>1.500</td>
<td>0.34</td>
<td>0.40</td>
</tr>
<tr>
<td>SRR0745HA-391M</td>
<td>390.0 ±20</td>
<td>1.850</td>
<td>0.32</td>
<td>0.36</td>
</tr>
<tr>
<td>SRR0745HA-471M</td>
<td>470.0 ±20</td>
<td>2.200</td>
<td>0.29</td>
<td>0.34</td>
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<tr>
<td>SRR0745HA-561M</td>
<td>560.0 ±20</td>
<td>2.600</td>
<td>0.26</td>
<td>0.30</td>
</tr>
<tr>
<td>SRR0745HA-681M</td>
<td>680.0 ±20</td>
<td>2.800</td>
<td>0.24</td>
<td>0.28</td>
</tr>
<tr>
<td>SRR0745HA-821M</td>
<td>820.0 ±20</td>
<td>3.500</td>
<td>0.22</td>
<td>0.26</td>
</tr>
<tr>
<td>SRR0745HA-102M</td>
<td>1000.0 ±20</td>
<td>4.100</td>
<td>0.20</td>
<td>0.24</td>
</tr>
</tbody>
</table>

**General Specifications**
- Operating Temperature: -55 °C to +150 °C (Temperature rise included)
- Storage Temperature: -55 °C to +150 °C
- Temperature Rise: 40 °C typ. at rated Irms
- Inductance Drop: 25 % typ. at Isat
- Moisture Sensitivity Level: 1
- ESD Classification (HBM): N/A

**Materials**
- Core: Ferrite DR & RI
- Wire: Enamelled copper
- Terminal Finish: Sn/Ag/Cu
- Packaging: 1000 pcs. per 13-inch reel

**Product Dimensions**

**How to Order**
SRR0745HA - 100M

**Recommended Layout**

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

** 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.

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SRR0745HA Series - Shielded Power Inductors

**Soldering Profile**

Profile Feature | Pb Free Assembly
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Preheat | 150 °C
- Temperature Min. (T\text{min})
- Temperature Max. (T\text{max})
- Time (t\text{p}) from T\text{min} to T\text{max}
200 °C
60-120 seconds
Ramp-up Rate (T\text{L} to T\text{p}) | 3 °C/second max.
Liquidous temperature (T\text{L}) | 217 °C
Time (t\text{L}) maintained above T\text{L} | 60-150 seconds
Peak package body temperature (T\text{p}) | 250 °C
Time (t\text{p}) at T\text{c} - 5 °C | < 30 seconds
(T\text{p} should be equal to or less than T\text{c})
Ramp-Down Rate (T\text{p} to T\text{L}) | 6 °C/second max.
Time 25 °C to Peak Temperature | 8 minutes max.

**Typical Current Characteristics**

**SRR0745HA-100M**

**SRR0745HA-220M**

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Packaging Specifications

DIMENSIONS: MM (INCHES)

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