Features

- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- Inductance range 0.1 to 10 µH
- RoHS compliant* and halogen free**

SRP3020C Series – Shielded Power Inductors

Operating Temperature
- From -40 °C to +125 °C (Temperature rise included)

Storage Temperature (Component)
- From -40 °C to +125 °C

Rated Current
- Inductance drops 30% at Isat
- Temperature Rise... 40 °C at rated Irms

MSL
- 1

ESD Classification (HBM)
- N/A

Note 1: Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all can affect the part temperature. Part temperature should be verified in the end application.

Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance @ 100 kHz / 1V L (µH)</th>
<th>Tol. %</th>
<th>Q Min. @ 100 kHz</th>
<th>SRF (MHz) Typ.</th>
<th>DCR (mΩ) Typ.</th>
<th>I rms (A) Typ.</th>
<th>I sat (A) Typ.</th>
<th>Marking</th>
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</thead>
<tbody>
<tr>
<td>SRP3020C-R10Y</td>
<td>0.10 ± 30 %</td>
<td>10</td>
<td>208</td>
<td>6.5</td>
<td>7</td>
<td>10</td>
<td>11.5</td>
<td>.10H</td>
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<tr>
<td>SRP3020C-R22Y</td>
<td>0.22 ± 30 %</td>
<td>10</td>
<td>140</td>
<td>11.5</td>
<td>14</td>
<td>8</td>
<td>9.2</td>
<td>.22H</td>
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<tr>
<td>SRP3020C-R36M</td>
<td>0.36 ± 20 %</td>
<td>10</td>
<td>105</td>
<td>17</td>
<td>21</td>
<td>7</td>
<td>8</td>
<td>.36H</td>
</tr>
<tr>
<td>SRP3020C-R47M</td>
<td>0.47 ± 20 %</td>
<td>10</td>
<td>83</td>
<td>19.7</td>
<td>23</td>
<td>6</td>
<td>7</td>
<td>.47H</td>
</tr>
<tr>
<td>SRP3020C-R68M</td>
<td>0.68 ± 20 %</td>
<td>10</td>
<td>72</td>
<td>24</td>
<td>29</td>
<td>5.5</td>
<td>6</td>
<td>.68H</td>
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<tr>
<td>SRP3020C-100M</td>
<td>1.0 ± 20 %</td>
<td>10</td>
<td>66</td>
<td>30</td>
<td>36</td>
<td>5</td>
<td>5.5</td>
<td>1.0H</td>
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<td>SRP3020C-1R5M</td>
<td>1.5 ± 20 %</td>
<td>10</td>
<td>50</td>
<td>44</td>
<td>50</td>
<td>3.7</td>
<td>4</td>
<td>1.5H</td>
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<td>SRP3020C-2R2M</td>
<td>2.2 ± 20 %</td>
<td>10</td>
<td>75</td>
<td>65</td>
<td>75</td>
<td>3.5</td>
<td>3.7</td>
<td>2.2H</td>
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<tr>
<td>SRP3020C-3R3M</td>
<td>3.3 ± 20 %</td>
<td>10</td>
<td>145</td>
<td>125</td>
<td>145</td>
<td>2.6</td>
<td>2.8</td>
<td>3.3H</td>
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<td>SRP3020C-4R7M</td>
<td>4.7 ± 20 %</td>
<td>10</td>
<td>200</td>
<td>167</td>
<td>200</td>
<td>1.8</td>
<td>2</td>
<td>4.7H</td>
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<td>SRP3020C-5R6M</td>
<td>5.6 ± 20 %</td>
<td>10</td>
<td>238</td>
<td>205</td>
<td>238</td>
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<td>1.9</td>
<td>5.6H</td>
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<td>SRP3020C-6R8M</td>
<td>6.8 ± 20 %</td>
<td>10</td>
<td>300</td>
<td>260</td>
<td>300</td>
<td>1.6</td>
<td>1.8</td>
<td>6.8H</td>
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<tr>
<td>SRP3020C-8R2M</td>
<td>8.2 ± 20 %</td>
<td>10</td>
<td>390</td>
<td>340</td>
<td>390</td>
<td>1.4</td>
<td>1.4</td>
<td>8.2H</td>
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<td>SRP3020C-100M</td>
<td>10 ± 20 %</td>
<td>10</td>
<td>422</td>
<td>360</td>
<td>422</td>
<td>1.3</td>
<td>1.3</td>
<td>10H</td>
</tr>
</tbody>
</table>

General Specifications

- Operating Temperature: -40 °C to +125 °C (Temperature rise included)
- Storage Temperature (Component): -40 °C to +125 °C
- Rated Current: Inductance drops 30% at Isat
- Temperature Rise: 40 °C at rated Irms

Materials

- Core: Metal alloy powder
- Wire: Enameled copper
- Terminal Finish: Sn

Packaging

- 3000 pcs. per 13-inch reel

How to Order

SRP3020C - 100M

Model

Value Code (see table)

Schematic

Recommended Layout

WARNING

Cancer and Reproductive Harm

www.P65Warnings.ca.gov

Note 1: Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all can affect the part temperature. Part temperature should be verified in the end application.

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Soldering Profile

Temperature Rise (°C)

DC Current (A)

Inductance (μH)

PRE-HEATING

SOLDERING

T_p (260 °C / 10 seconds max.)

NATURAL COOLING

Time (Seconds)

REFLOW TIMES: 3 MAX.

L vs. I Charts

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L vs. I Charts (Continued)

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