SRP3020TA Series - Shielded Power Inductors

Features
- Shielded construction
- Metal alloy powder core
- High saturation current
- Inductance range 0.1 to 10 µH
- AEC-Q200 compliant
- RoHS compliant* and halogen free**

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance @ 100 kHz / 1 V Q Min.</th>
<th>SRF (kHz) Typ.</th>
<th>DCR (mΩ) Typ.</th>
<th>DCR (mΩ) Max.</th>
<th>I rms (A) Typ.</th>
<th>I sat (A) Typ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP3020TA-R10Y</td>
<td>0.10 ± 30 %</td>
<td>340</td>
<td>6.6</td>
<td>9</td>
<td>10.5</td>
<td>14.0</td>
</tr>
<tr>
<td>SRP3020TA-R22Y</td>
<td>0.22 ± 30 %</td>
<td>185</td>
<td>11</td>
<td>14</td>
<td>9.0</td>
<td>11.2</td>
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<tr>
<td>SRP3020TA-R33M</td>
<td>0.33 ± 20 %</td>
<td>160</td>
<td>17</td>
<td>21</td>
<td>8.0</td>
<td>10.0</td>
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<tr>
<td>SRP3020TA-R47M</td>
<td>0.47 ± 20 %</td>
<td>105</td>
<td>19.7</td>
<td>23</td>
<td>7.0</td>
<td>9.0</td>
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<tr>
<td>SRP3020TA-R68M</td>
<td>0.68 ± 20 %</td>
<td>94</td>
<td>25.5</td>
<td>29</td>
<td>5.5</td>
<td>7.0</td>
</tr>
<tr>
<td>SRP3020TA-1R0M</td>
<td>1.0 ± 20 %</td>
<td>82</td>
<td>32</td>
<td>38</td>
<td>4.0</td>
<td>5.0</td>
</tr>
<tr>
<td>SRP3020TA-1R5M</td>
<td>1.5 ± 20 %</td>
<td>54</td>
<td>42</td>
<td>50</td>
<td>3.8</td>
<td>4.0</td>
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<tr>
<td>SRP3020TA-2R2M</td>
<td>2.2 ± 20 %</td>
<td>45</td>
<td>65</td>
<td>75</td>
<td>3.5</td>
<td>3.7</td>
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<tr>
<td>SRP3020TA-3R3M</td>
<td>3.3 ± 20 %</td>
<td>40</td>
<td>125</td>
<td>145</td>
<td>3.0</td>
<td>3.5</td>
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<tr>
<td>SRP3020TA-4R7M</td>
<td>4.7 ± 20 %</td>
<td>34</td>
<td>172</td>
<td>200</td>
<td>2.6</td>
<td>3.0</td>
</tr>
<tr>
<td>SRP3020TA-5R6M</td>
<td>5.6 ± 20 %</td>
<td>29</td>
<td>205</td>
<td>238</td>
<td>2.2</td>
<td>2.6</td>
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<tr>
<td>SRP3020TA-6R8M</td>
<td>6.8 ± 20 %</td>
<td>24</td>
<td>260</td>
<td>300</td>
<td>1.9</td>
<td>2.2</td>
</tr>
<tr>
<td>SRP3020TA-8R2M</td>
<td>8.2 ± 20 %</td>
<td>22</td>
<td>340</td>
<td>390</td>
<td>1.6</td>
<td>1.9</td>
</tr>
<tr>
<td>SRP3020TA-100M</td>
<td>10 ± 20 %</td>
<td>20</td>
<td>366</td>
<td>422</td>
<td>1.4</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Product Dimensions

Electrical Specifications @ 25 °C

Operating Temperature
-55 °C to +150 °C (Temperature rise included)

Storage Temperature (Component)
-55 °C to +150 °C

Rated Current
Inductance drops 30 % at Isat

Temperature Rise...
40 °C at rated Irms

ESD Classification (HBM)
N/A

Core: Metal alloy powder
Wire: Enamelled copper

Materials
General Specifications

Materials
General Specifications

Electrical Specifications @ 25 °C

- How to Order
- Schematic
- Recommended Layout

WARNING
Cancer and Reproductive Harm
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.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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Soldering Profile

PRE-HEATING  
SOLDERING  
NATURAL COOLING

Time (Seconds)

Temperature (°C)

TP (245 °C / 20~40 seconds)

TP (260 °C / 10 seconds max.)

60 – 180 seconds

60 – 150 seconds

480 seconds max.

REFLOW TIMES: 3 MAX.

L vs. I Charts

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L vs. I Charts (Continued)

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Packaging Specifications

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