SRP4012TA Series - Shielded Power Inductors

*RoHS COMPLIANT
& HALOGEN FREE

**HALOGEN FREE

4R7

Features
■ Shielded construction
■ Carbonyl powder core
■ High saturation current
■ Low profile - 1.0 mm

■ Inductance range: 0.10 to 10 µH
■ AEC-Q200 qualified
■ RoHS compliant* and halogen free**

Electrical Specifications @ 25 °C

<table>
<thead>
<tr>
<th>Bourns Part Number</th>
<th>Inductance @ 100 KHz / 1 V</th>
<th>Q (Min.) @100 KHz / 1 V</th>
<th>SRF (MHz) Typ.</th>
<th>DCR (mΩ) Typ.</th>
<th>DCR (mΩ) Max.</th>
<th>Irms (A)</th>
<th>Isat (A)</th>
<th>Terminal Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP4012TA-R10Y</td>
<td>0.10 ±30</td>
<td>5</td>
<td>400</td>
<td>4.3</td>
<td>5.5</td>
<td>11.5</td>
<td>25</td>
<td>L (μH)</td>
</tr>
<tr>
<td>SRP4012TA-R22M</td>
<td>0.22 ±20</td>
<td>5</td>
<td>200</td>
<td>6.6</td>
<td>8</td>
<td>8.5</td>
<td>20</td>
<td></td>
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<tr>
<td>SRP4012TA-R36M</td>
<td>0.36 ±20</td>
<td>10</td>
<td>143</td>
<td>15.5</td>
<td>18</td>
<td>6.5</td>
<td>8.5</td>
<td></td>
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<tr>
<td>SRP4012TA-R47M</td>
<td>0.47 ±20</td>
<td>10</td>
<td>120</td>
<td>18</td>
<td>20</td>
<td>6.0</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td>SRP4012TA-R60M</td>
<td>0.60 ±20</td>
<td>10</td>
<td>117</td>
<td>22.5</td>
<td>26</td>
<td>5.3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>SRP4012TA-R10M</td>
<td>1.0 ±20</td>
<td>10</td>
<td>80</td>
<td>41</td>
<td>47</td>
<td>4.0</td>
<td>6</td>
<td></td>
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<tr>
<td>SRP4012TA-R12M</td>
<td>1.2 ±20</td>
<td>10</td>
<td>70</td>
<td>48</td>
<td>56</td>
<td>3.5</td>
<td>5</td>
<td></td>
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<tr>
<td>SRP4012TA-R15M</td>
<td>1.5 ±20</td>
<td>10</td>
<td>62</td>
<td>55</td>
<td>63.3</td>
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<td>4</td>
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<tr>
<td>SRP4012TA-R22M</td>
<td>2.2 ±20</td>
<td>10</td>
<td>58</td>
<td>69.2</td>
<td>80</td>
<td>2.8</td>
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<tr>
<td>SRP4012TA-R33M</td>
<td>3.3 ±20</td>
<td>10</td>
<td>41</td>
<td>84</td>
<td>97</td>
<td>2.3</td>
<td>3</td>
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<td>SRP4012TA-R47M</td>
<td>4.7 ±20</td>
<td>10</td>
<td>35</td>
<td>128</td>
<td>145</td>
<td>2.0</td>
<td>2.5</td>
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<td>SRP4012TA-R56M</td>
<td>5.6 ±20</td>
<td>10</td>
<td>30</td>
<td>180</td>
<td>208</td>
<td>1.7</td>
<td>2.3</td>
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<tr>
<td>SRP4012TA-R68M</td>
<td>6.8 ±20</td>
<td>10</td>
<td>28</td>
<td>300</td>
<td>360</td>
<td>1.5</td>
<td>1.7</td>
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<tr>
<td>SRP4012TA-R82M</td>
<td>8.2 ±20</td>
<td>10</td>
<td>25</td>
<td>313</td>
<td>376</td>
<td>1.4</td>
<td>1.6</td>
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<tr>
<td>SRP4012TA-100M</td>
<td>10.0 ±20</td>
<td>10</td>
<td>23</td>
<td>410</td>
<td>463</td>
<td>1.3</td>
<td>1.4</td>
<td></td>
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</tbody>
</table>

How to Order
SRP4012TA - 100M

Recommended Layout

General Specifications

Test Voltage....................................1.0 V
Test Frequency ..................................100 KHz
Operating Temperature .............................55 °C to +150 °C
(temperature rise included)
Storage Temperature .............................55 °C to +150 °C
Rated Current .....................................Inductance drops 20 % at Isat
Temperature Rise ..................40 °C at rated Irms
Moisture Sensitivity Level ..................1
ESD Classification (HBM).............N/A

Materials
Core..................Carbonyl powder
Wire..................Enameled copper
Terminal Finish ..............Sn
Packaging.....4000 pcs. per 13-inch reel

WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

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SRP4012TA Series - Shielded Power Inductors

L vs. I Charts

Inductance (μH) vs. DC Current (A) for different models:
- SRP4012TA-R22M
- SRP4012TA-R36M
- SRP4012TA-R47M
- SRP4012TA-R60Y
- SRP4012TA-R10Y
- SRP4012TA-R1R2M
- SRP4012TA-R1R5M
- SRP4012TA-R2R2M
- SRP4012TA-R3R3M
- SRP4012TA-R4R7M
- SRP4012TA-R5R6M
- SRP4012TA-R6R8M
- SRP4012TA-R8R2M
- SRP4012TA-1R0M
- SRP4012TA-1R2M
- SRP4012TA-1R5M
- SRP4012TA-2R2M
- SRP4012TA-3R3M
- SRP4012TA-4R7M
- SRP4012TA-5R6M
- SRP4012TA-6R8M
- SRP4012TA-8R2M
- SRP4012TA-100M

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Soldering Profile

PRE-HEATING

SOLDERING

NATURAL
COOLING

Temperature (°C)

Time (Seconds)

25

20

15

60 - 180 seconds

60 - 150 seconds

480 seconds max.

REFLOW TIMES: 3 MAX.

Packaging Specifications

QTY: 4000 PCS. PER REEL

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