SMD Inductors(Coils)
For Power Line(Wound, Magnetic Shielded)

VLS Series VLS3015

FEATURES
- Miniature size
  Mount area: 3×3mm
  Height: 1.5mm max.
- Generic use for portable DC to DC converter line.
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and real package.
- The products do not contain lead and support lead-free soldering.

APPLICATIONS
DVCs, DSCs, PDAs, LCD displays, cellular phones, HDDs, etc.

SHAPES AND DIMENSIONS

RECOMMENDED PC BOARD PATTERN

ELECTRICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Inductance (µH)</th>
<th>Inductance tolerance (%)</th>
<th>Test frequency (MHz)</th>
<th>DC resistance (Ω)</th>
<th>Rated current(A)*</th>
<th>Based on inductance change</th>
<th>Based on temperature rise</th>
</tr>
</thead>
<tbody>
<tr>
<td>VLS3015T-1R0N2R0</td>
<td>1 ±30</td>
<td>1</td>
<td>0.058</td>
<td>0.048</td>
<td>2</td>
<td>2.2</td>
<td>2.2</td>
</tr>
<tr>
<td>VLS3015T-1R5N1R6</td>
<td>1.5 ±30</td>
<td>1</td>
<td>0.074</td>
<td>0.062</td>
<td>1.6</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>VLS3015T-2R2M1R4</td>
<td>2.2 ±20</td>
<td>1</td>
<td>0.084</td>
<td>0.07</td>
<td>1.4</td>
<td>1.5</td>
<td>1.8</td>
</tr>
<tr>
<td>VLS3015T-3R3M1R2</td>
<td>3.3 ±20</td>
<td>1</td>
<td>0.112</td>
<td>0.093</td>
<td>1.2</td>
<td>1.3</td>
<td>1.6</td>
</tr>
<tr>
<td>VLS3015T-4R7MR99</td>
<td>4.7 ±20</td>
<td>1</td>
<td>0.136</td>
<td>0.113</td>
<td>0.99</td>
<td>1.1</td>
<td>1.4</td>
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<tr>
<td>VLS3015T-6R8MR86</td>
<td>6.8 ±20</td>
<td>1</td>
<td>0.211</td>
<td>0.176</td>
<td>0.86</td>
<td>0.96</td>
<td>1.1</td>
</tr>
<tr>
<td>VLS3015T-100MR70</td>
<td>10 ±20</td>
<td>1</td>
<td>0.276</td>
<td>0.234</td>
<td>0.7</td>
<td>0.78</td>
<td>1</td>
</tr>
<tr>
<td>VLS3015T-150MN58</td>
<td>15 ±20</td>
<td>1</td>
<td>0.422</td>
<td>0.352</td>
<td>0.58</td>
<td>0.64</td>
<td>0.8</td>
</tr>
<tr>
<td>VLS3015T-220MR45</td>
<td>22 ±20</td>
<td>1</td>
<td>0.622</td>
<td>0.518</td>
<td>0.45</td>
<td>0.5</td>
<td>0.6</td>
</tr>
<tr>
<td>VLS3015T-330MR36</td>
<td>33 ±20</td>
<td>1</td>
<td>0.959</td>
<td>0.799</td>
<td>0.36</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>VLS3015T-470MR31</td>
<td>47 ±20</td>
<td>1</td>
<td>1.406</td>
<td>1.172</td>
<td>0.31</td>
<td>0.34</td>
<td>0.4</td>
</tr>
</tbody>
</table>

* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

• Operating temperature range: −40 to +105°C (Including self-temperature rise)

TYPICAL ELECTRICAL CHARACTERISTICS
INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

VLS3015T-1R0N2R0

VLS3015T-1R5N1R6

Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exemptions.

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• All specifications are subject to change without notice.
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

VLS3015T-2R2M1R4

VLS3015T-3R3M1R2

VLS3015T-4R7MR99

VLS3015T-6R8MR86

VLS3015T-100MR70

VLS3015T-150MR58

VLS3015T-220MR45

VLS3015T-330MR36

VLS3015T-470MR31

TEST CIRCUIT

1: LCR meter 4285A f=1MHz
2: DC constant current

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