Mini Spring™ Air Core Inductors

- Small air core inductors feature high Q and tight tolerances
- Acrylic jacket provides a flat top for pick and place
- Solder coated leads ensure reliable soldering

Terminations  RoHS compliant tin-silver over copper. Other terminations available at additional cost.

Ambient temperature  -40°C to +125°C with Irms current, +125°C to +140°C with derated current

Storage temperature  Component: -40°C to +140°C. Packaging: -40°C to +80°C

Resistance to soldering heat  Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Temperature Coefficient of Inductance (TCI)  ±5 to ±70 ppm/°C

Moisture Sensitivity Level (MSL)  1 (unlimited floor life at <30°C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)  One per billion hours / one billion hours, calculated per Telcordia SR-332

Packaging  A0xT: 700/7” reel; 125/3” reel. Plastic tape: 12 mm wide, 0.32 mm thick, 8 mm pocket spacing, 3.3 mm pocket depth
BxxT: 500/7” reel; 2200/13” reel. Plastic tape: 16 mm wide, 0.28 mm thick, 8 mm pocket spacing, 3.4 mm pocket depth

PCB washing  Only pure water or alcohol recommended

<table>
<thead>
<tr>
<th>Part number*</th>
<th>Turns</th>
<th>L^2 (nH)</th>
<th>Percent tol*</th>
<th>Q^ min</th>
<th>SRF min (GHz)</th>
<th>DCR max (mOhm)</th>
<th>Irms*</th>
<th>Weight (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A01TKL_</td>
<td>1</td>
<td>2.5</td>
<td>10</td>
<td>145</td>
<td>12.5</td>
<td>1.1</td>
<td>4</td>
<td>31</td>
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<tr>
<td>A02T_L_</td>
<td>2</td>
<td>5.0</td>
<td>5.2, 1</td>
<td>140</td>
<td>6.5</td>
<td>1.8</td>
<td>4</td>
<td>42</td>
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<td>A03T_L_</td>
<td>3</td>
<td>8.0</td>
<td>5.2, 1</td>
<td>140</td>
<td>5.0</td>
<td>2.6</td>
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<td>A04T_L_</td>
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<td>12.5</td>
<td>5.2, 1</td>
<td>137</td>
<td>3.3</td>
<td>3.4</td>
<td>4</td>
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<td>A05T_L_</td>
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<td>18.5</td>
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<td>132</td>
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<td>3.9</td>
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<td>B06T_L_</td>
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<td>17.5</td>
<td>5.2, 1</td>
<td>100</td>
<td>2.2</td>
<td>4.5</td>
<td>4</td>
<td>100</td>
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<td>2.1</td>
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<td>B09T_L_</td>
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<td>112</td>
<td>1.5</td>
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<td>133</td>
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<td>106</td>
<td>1.2</td>
<td>7.9</td>
<td>4</td>
<td>147</td>
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</tbody>
</table>

1. When ordering, please specify tolerance, termination and packaging codes:

   A02TGLC

   Tolerance:  F = 1%  G = 2%  J = 5%  K = 10% (Table shows stock tolerances in bold.)

   Termination:  L = RoHS compliant tin-silver (96.5/3.5) over copper. Special order:  T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

   Packaging:  C = 7” machine-ready reel. EIA-481 embossed plastic tape, 700 (AxxT) or 500 (BxxT) parts per full reel.

   B = Less than full reel. In tape, but not machine-ready. To have a leader and trailer added ($25 charge), use code letter C instead.

   D = 13” machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked, 2500 (AxxT) or 2200 (BxxT) parts per full reel.

2. Inductance measured at 150 MHz with an Agilent/HP 4286 or equivalent, a Coilcraft SMD-A and correlation.

3. Tolerances in bold are stocked for immediate shipment.

4. Q measured at 150 MHz using an Agilent/HP 4291A with an Agilent/HP 16193A test fixture or equivalents.

5. SRF tested on an Agilent/HP 8720D or equivalent and a Coilcraft SMD-D fixture.

6. DCR tested on the Cambridge Technology Model Micro-ohmmeter or equivalent.

7. Current that causes a 15°C temperature rise from 25°C ambient.

8. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.
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Typical L vs Frequency

Typical Q vs Frequency

Typical Irms Derating

Designer's Kit C302 contains 12 each of all 5% values
Designer's Kit C302-2 contains 12 each of all 2% values