High-Current Air Core Inductors

The use of heavy gauge wire allows these parts to have the lowest DCR and highest current ratings of our air-core inductors. They offer Q values of 100 or greater from 150 MHz to 1 GHz.

Request free evaluation samples by contacting Coilcraft or visiting www.coilcraft.com.

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance (nH)</th>
<th>Q typ</th>
<th>SRF (GHz)</th>
<th>DCR (mOhm)</th>
<th>I rms (A)</th>
<th>Wt (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA3092-AL</td>
<td>3.7</td>
<td>100</td>
<td>17.5</td>
<td>2.0</td>
<td>7.0</td>
<td>150</td>
</tr>
<tr>
<td>GA3093-AL</td>
<td>6.6</td>
<td>100</td>
<td>4.0</td>
<td>2.0</td>
<td>7.0</td>
<td>220</td>
</tr>
<tr>
<td>GA3094-AL</td>
<td>12.0</td>
<td>140</td>
<td>2.4</td>
<td>2.0</td>
<td>7.0</td>
<td>280</td>
</tr>
<tr>
<td>GA3095-AL</td>
<td>17.5</td>
<td>140</td>
<td>2.2</td>
<td>2.0</td>
<td>7.0</td>
<td>390</td>
</tr>
<tr>
<td>WA3096-AL</td>
<td>22.0</td>
<td>160</td>
<td>2.6</td>
<td>2.5</td>
<td>7.0</td>
<td>470</td>
</tr>
<tr>
<td>WA3097-AL</td>
<td>30.0</td>
<td>160</td>
<td>2.0</td>
<td>3.0</td>
<td>7.0</td>
<td>570</td>
</tr>
</tbody>
</table>

1. When ordering, please specify packaging code:
   - GA3097-AL: C = 7” machine-ready reel. EIA-481 embossed plastic tape (250 parts per full reel).
   - B = Less than full reel. In tape, 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 (1000 parts per full reel). Factory order only, not stocked.

2. L and Q measured at 150 MHz, 0.1 Vrms, 0 A using an Agilent/HP 4291A impedance analyzer with an Agilent/HP 16193A test fixture.

3. SRF measured using an Agilent/HP 8722ES network analyzer and a Coilcraft SMD-D test fixture.

4. DCR measured using a micro-ohmmeter.

5. Current that causes a 15°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

6. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

Terminations RoHS compliant tin-silver (96.5/3.5) over copper

Ambient temperature –40°C to +125°C with Irms current

Maximum part temperature +140°C (ambient + temp rise)

Storage temperature Component: –40°C to +140°C. Tape and reel 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 (TCL) +5 to +70 ppm/°C

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

Mean Time Between Failures (MTBF) 1 billion hours

Packaging
   - GA3092 – GA3095 250/7”reel; 1000/13” reel  Plastic tape: 16 mm wide, 0.35 mm thick, 12 mm pocket spacing, 4.9 mm pocket depth
   - WA3096, WA3097 400/7”reel; 1500/13” reel Plastic tape: 16 mm wide, 0.5 mm thick, 16 mm pocket spacing, 5.26 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

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L vs Frequency

Q vs Frequency

Recommended Land Patterns

Dimensions are in inches or mm.

Soldered lead length

135° max

45° min