## High-Current Air Core Inductors

**GA3092-AL**
**GA3093-AL**
**GA3094-AL**
**GA3095-AL**
**WA3096-AL**
**WA3097-AL**

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance(^2) ±5%(nH)</th>
<th>Q(^2) typ</th>
<th>SRF (GHz)</th>
<th>DCR max(^4) (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-ALC**: C = 7” machine-ready reel. EIA-481 embossed plastic tape (GA3092 - GA3095 250 parts per full reel; WA3096, WA3097 400 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).
   - **B**: Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.
   - **D**: 13” machine-ready reel. EIA-481 embossed plastic tape (GA3092 - GA3095 1000 parts per full reel; WA3096, WA3097 1500 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.

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](http://www.coilcraft.com).

### Terminations

- **RoHS compliant tin-silver (96.5/3.5) over copper**
- **Ambient temperature**: -40°C to +125°C with I\(^{rms}\) 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)

### 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](Doc787_PCB_Washing.pdf).

**Ambient temperature**

- -40°C to +125°C with I\(^{rms}\) current

**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)

**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](Doc787_PCB_Washing.pdf).
High-Current Air Core Inductors

L vs Frequency

Q vs Frequency

Recommended Land Patterns

Dimensions are in inches/ millimeters.