DW3316 Coupled Inductors for xDSL

- Coupled inductor optimized for xDSL filtering applications
- Can be used as a common mode choke, 1:1 transformer or in SEPIC applications

**Core material** Ferrite  
**Terminations** RoHS compliant gold over nickel over phos bronze. Other terminations available at additional cost.  
**Weight** 1.13 – 1.34 g  
**Ambient temperature** -40°C to +85°C  
**Storage temperature** Component: -40°C to +85°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  
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)  
**Failures in Time (FIT) / Mean Time Between Failures (MTBF)** 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332  
**Packaging** 750 per 13” reel Plastic tape: 24 mm wide, 0.36 mm thick, 16 mm pocket spacing, 5.5 mm pocket depth  
**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

### Specifications

#### Physical Characteristics
- **Dimensions (inches, mm)**  
  - **Length**: 1.00 (25.4)  
  - **Diameter**: 0.330 (8.38)  
  - **Height**: 0.490 (12.45)  
  - **Pocket Size**: 0.115 (2.92)  
  - **Pocket Depth**: 0.110 (2.79)  

#### Electrical Characteristics

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance1</th>
<th>DCR max2</th>
<th>SRF typ3</th>
<th>Isat4</th>
</tr>
</thead>
<tbody>
<tr>
<td>DW3316-155ML</td>
<td>1.5 (mH)</td>
<td>10.8 (Ohms)</td>
<td>1.7 (MHz)</td>
<td>600 (mA)</td>
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<tr>
<td>DW3316-275ML</td>
<td>2.7 (mH)</td>
<td>18.0 (Ohms)</td>
<td>1.25 (MHz)</td>
<td>300 (mA)</td>
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<tr>
<td>DW3316-335ML</td>
<td>3.3 (mH)</td>
<td>20.0 (Ohms)</td>
<td>1.10 (MHz)</td>
<td>230 (mA)</td>
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<tr>
<td>DW3316-395ML</td>
<td>3.9 (mH)</td>
<td>23.0 (Ohms)</td>
<td>0.968 (MHz)</td>
<td>180 (mA)</td>
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<tr>
<td>DW3316-475ML</td>
<td>4.7 (mH)</td>
<td>26.0 (Ohms)</td>
<td>0.850 (MHz)</td>
<td>160 (mA)</td>
</tr>
<tr>
<td>DW3316-685ML</td>
<td>6.8 (mH)</td>
<td>42.0 (Ohms)</td>
<td>0.690 (MHz)</td>
<td>150 (mA)</td>
</tr>
</tbody>
</table>

1. When ordering, please specify termination and packaging codes:  
   - **Termination**: L = Gold over nickel over phos bronze terminations  
     Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).  
   - **Packaging**: D = 13” machine-ready reel. EIA-481 embossed plastic tape (750 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 D.

2. Inductance is per winding, tested at 10 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.

3. SRF is measured using an Agilent/HP 8753D network analyzer.

4. DC current at which the inductance drops 10% (typ) from its value without current.

5. Electrical specifications at 25°C.  
   Refer to Doc 362 “Soldering Surface Mount Components” before soldering.