Backlight Inductors – DO1607B Series

The low profile DO1607B Series has the high breakdown voltage ratings required for backlight applications. Only 2.49 mm high, they have a footprint of 6,6 x 4,5 mm.

These inductors are constructed of high temperature materials that provide excellent heat deflection to prevent damage during solder reflow. Standard inductance values range from 1 to 6.8 mH and custom values are available to meet specific requirements.

Coilcraft Designer’s Kit C335 contains samples of each of the standard parts shown. To order, contact Coilcraft or visit http://order.coilcraft.com.

### Typical Inductance vs. Current

<table>
<thead>
<tr>
<th>Part number</th>
<th>L² ±20% (mH)</th>
<th>DCR³ max (Ohms)</th>
<th>Insulation core-winding (Mohms)</th>
<th>Isat⁴ (mA)</th>
<th>Irms⁵ (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO1607B-105ML</td>
<td>1.0</td>
<td>19</td>
<td>&gt;10</td>
<td>100</td>
<td>150</td>
</tr>
<tr>
<td>DO1607B-155ML</td>
<td>1.5</td>
<td>21</td>
<td>&gt;10</td>
<td>75</td>
<td>140</td>
</tr>
<tr>
<td>DO1607B-225ML</td>
<td>2.2</td>
<td>42</td>
<td>&gt;10</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>DO1607B-335ML</td>
<td>3.3</td>
<td>52</td>
<td>&gt;10</td>
<td>50</td>
<td>90</td>
</tr>
<tr>
<td>DO1607B-475ML</td>
<td>4.7</td>
<td>80</td>
<td>&gt;10</td>
<td>45</td>
<td>75</td>
</tr>
<tr>
<td>DO1607B-685ML</td>
<td>6.8</td>
<td>125</td>
<td>&gt;10</td>
<td>40</td>
<td>60</td>
</tr>
</tbody>
</table>

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

   - DO1607B-685MLC
   - Termination: L = RoHS compliant electroplated gold (<50 µin) over nickel over moly-manganese.
   - 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 (750 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 (2500 parts per full reel).

2. Inductance tested at 0.1 Vrms, 100 kHz, 0 Adc on Agilent/HP 4192A.
3. DCR tested on Cambridge Technology 510-A with Coilcraft CCF-859 fixture.
4. DC current at which the inductance drops 10% (typ) from its value without current.
5. Average current for a 40°C rise above 25°C ambient.
6. Operating temperature -40°C to +85°C.
7. Electrical specifications at 25°C.

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

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### Recommended Land Pattern

- Weight: 0.12 – 0.13 g
- Tape and reel: 750/7″ reel; 2500/13″ reel Plastic tape: 12 mm wide, 0.28 mm thick, 8 mm pocket spacing, 3.0 mm pocket depth