### SMT Power Inductors – DO1608C

- High energy storage and very low resistance
- Defense Supply Center CID A-A-59742

#### Designer’s Kit C377 contains 3 of each stocked part

**Core material** Ferrite

**Core and winding loss** See [www.coilcraft.com/coreloss](http://www.coilcraft.com/coreloss)

**Terminations** RoHS compliant gold over nickel over moly-manganese. Other terminations available at additional cost.

**Weight** 128 – 164 mg

**Ambient temperature** –40°C to +85°C with Irms current, +85°C to +125°C with derated current

**Storage temperature** Component: –40°C to +125°C.

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

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

- Tallied at 100 kHz, 0.1 Vrms, 0 A dc using an Agilent/HP 4283B LCR meter or equivalent.
- To have a leader and trailer added ($25 charge), use code letter C instead.
- 40 second reflows at +260°C, parts cooled to room temperature between cycles
- Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles
- DC current at which the inductance drops 10% (typ) from its value without current.
- Current that causes the specified temperature rise from 25°C ambient.
- Electrical specifications at 25°C.

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<table>
<thead>
<tr>
<th>Part number</th>
<th>L2 (µH)</th>
<th>% tol</th>
<th>DCR max (Ohms)</th>
<th>SRF typ (MHz)</th>
<th>Isat (A)</th>
<th>Irms (A)²</th>
<th>20°C rise</th>
<th>40°C rise</th>
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<tr>
<td>DO1608C-102ML</td>
<td>1.0</td>
<td>20</td>
<td>0.05</td>
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<td>0.06</td>
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<td>0.11</td>
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</tbody>
</table>

1. Please specify tolerance, termination and packaging codes:

- **DO1608C-105MLC**
  - **Tolerance:** K = 10%, M = 20% (Table shows stock tolerances in bold.)
  - **Termination:** L = RoHS compliant gold 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. Tested at 100 kHz, 0.1 Vrms, 0 A dc using an Agilent/HP 4283B LCR meter or equivalent.

3. Tolerances in bold are stocked for immediate shipment.

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

5. Current that causes the specified temperature rise from 25°C ambient.

6. Electrical specifications at 25°C.

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

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SMT Power Inductors – DO1608C Series

Typical L vs Frequency

![Graph showing typical inductance vs frequency for different values of L.]

Typical L vs Current

![Graph showing typical inductance vs current for different values of L.]

Irms Derating

![Graph showing irms derating vs ambient temperature for different values of percent of rated irms.]

Dimensions are in inches (mm).