# SMT Power Inductors – DO5022P

- Excellent current handling – up to 28.8 A_{sat}
- Low dc resistance keeps power losses to a minimum

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**Designer’s Kit C311** contains 3 of each 20% tolerance part

**Core material** Ferrite

**Core and winding loss** See www.coilcraft.com/coreloss

**Terminations** RoHS compliant electroplated gold (<50 µin) over nickel over phos bronze. Other terminations available at additional cost.

**Weight** 2.8 – 3.9 g

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

**Maximum part temperature** +125°C (ambient + temp rise)

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

**Packaging** 250 per 13” reel Plastic tape: 32 mm wide, 0.38 mm thick, 24 mm pocket spacing, 7.8 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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## Specifications

<table>
<thead>
<tr>
<th>Part number</th>
<th>L(^2) (µH)</th>
<th>L(^2) Percent tol(^3)</th>
<th>DCR max (Ohms)</th>
<th>SRF typ(^4) (MHz)</th>
<th>Isat (A)(^5)</th>
<th>10% drop</th>
<th>20% drop</th>
<th>Irms(A)</th>
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<tbody>
<tr>
<td>DO5022P-102ML</td>
<td>1.0</td>
<td>20</td>
<td>0.009</td>
<td>80</td>
<td>27.6</td>
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<td>DO5022P-222ML</td>
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<td>20</td>
<td>0.014</td>
<td>80</td>
<td>18.5</td>
<td>19.8</td>
<td>7.1</td>
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<td>0.018</td>
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<td>15.5</td>
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<td>0.020</td>
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<td>DO5022P-822ML</td>
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<td>DO5022P-103ML</td>
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<td>20</td>
<td>0.031</td>
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<td>9.4</td>
<td>10.5</td>
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<td>1.1</td>
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</table>

1. Specify tolerance, termination and packaging codes:

**DO5022P-105ML**

- **Tolerance:** M = 20%, K = 10% (Table shows stock tolerances in bold.)
- **Termination:** L = RoHS compliant gold over nickel over phos bronze. Special order: T = RoHS tin-silver-copper (95.5/0.5) or S = non-RoHS tin-lead (63/37).
- **Packaging:** D = 13” machine-ready reel. EIA-481 embossed plastic tape (250 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.

3. Tolerances in bold are stocked for immediate shipment.

4. SRF >13 MHz measured using Agilent/HP 8753D network analyzer; <13 MHz using Agilent/HP 4192A.

5. DC current at which inductance drops the specified amount from its value without current.

6. Current that causes a 40°C temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

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

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**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.

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Please check web site for latest information.
SMT Power Inductors – DO5022P Series

Typical L vs Current

Typical L vs Frequency

* Allow an additional 0.01/0.254 in length and 0.005/0.127 in height for optional tin-lead and tin-silver-copper application.

Recommended Land Pattern

Internal code

Dash number

Start

Finish

Part Marking

Dimensions are in inches

mm

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