Shielded Power Inductors – DS5022P

The DS5022 Series of magnetically shielded power inductors is designed for the higher current requirements of portable computers, video recorders and other DC-DC conversion applications. They feature saturation current ratings as high as 18 Amps and rms current ratings up to 6.5 Amps. Low DC resistance (as low as 0.040 Ohms) keeps power losses to a minimum.

Coilcraft will continue to manufacture and support the DS5022P indefinitely, however for new designs, we recommend the MSS1278 as an alternative. The MSS1278 series is more cost effective, features a smaller footprint, lower DCR and better current handling.

**SPICE models on our web site**

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

   **DS5022P-105MLD**

   **Termination:** L = RoHS compliant electroplated gold (<50 µin) over nickel over phos bronze. Special order: T = RoHS tin-silver-copper (95.5/0.5/0.5) or S = non-RoHS tin-lead (63/37).

   **Packaging:** D = 13″ machine-ready reel. EIA-481 embossed plastic tape (250 parts per full reel). B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter D instead.

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.

3. DC current at which the inductance drops from its value without current.

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

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

**Core material** Ferrite

**Weight:** 2.6 – 3.0 g

**Terminations** RoHS compliant electroplated gold (<50 µin) over nickel over phos bronze.

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

**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** 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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Typical L vs Current

Inductance (µH) vs Current (A)

Current Derating

Ambient temperature (°C) vs Percent of rated Ims

Recommended Land Pattern

Dimensions are in inches (mm)


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This product may not be used in medical or high-risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

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