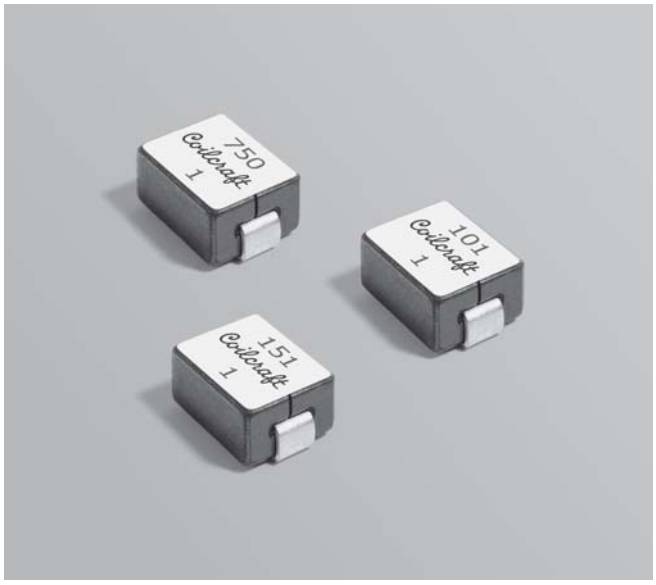
# Shielded Power Inductors – SLC1049




- Designed foruse in multi-phase VRM/VRD regulators and high current/high frequency DC/DC converters.
- Requires only 70 mm² of board space; can handle up to 61 A

**Core material** Ferrite

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

**Terminations** RoHS compliant matte tin over nickel over copper. Other terminations available at additional cost.

**Weight** 1.25 – 1.30 g

**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. 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

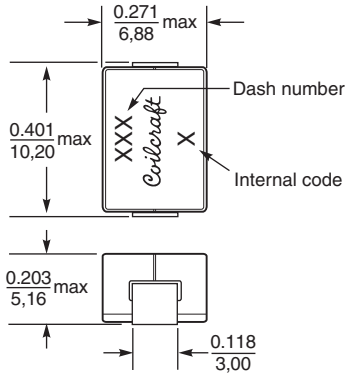
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

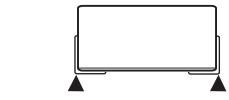
**Failures in Time (FIT) / Mean Time Between Failures (MTBF)** 38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging** 250/7″reel; 1000/13″ reel Plastic tape: 24 mm wide, 0.35 mm thick, 12 mm pocket spacing, 5.08 mm pocket depth

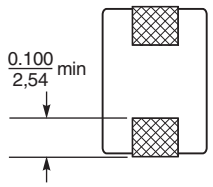
**PCB washing** Only pure water or alcohol recommended

| Part number[1] | L ±20%[2] (µH) | DCR ±5%[3] (mOhms) | SRF typ[4] (MHz) | Isat[5] (A) | Irms[6] (A) |
|---|---|---|---|---|---|
| SLC1049-750ML_ | 0.075 | 0.273 | 200 | 61.0 | 43.0 |
| SLC1049-101ML_ | 0.100 | 0.273 | 145 | 50.0 | 43.0 |
| SLC1049-121ML_ | 0.125 | 0.273 | 140 | 37.0 | 43.0 |
| SLC1049-151ML_ | 0.150 | 0.273 | 133 | 30.0 | 43.0 |



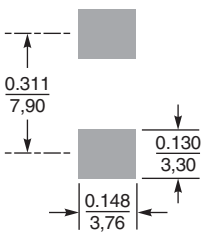



▲Points used for measuring DCR




Dimensions are in inches / mm

**Recommended Land Pattern**




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

   **SLC1049-151M L C**

   **Termination:** **L** = RoHS compliant matte tin over nickel over copper. **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 (250 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 (1000 per full reel). Factory order only, not stocked.
2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4263B LCR meter or equivalent.
3. DCR is measured on a micro-ohmmeter at points indicated in the dimensional diagram.
4. SRF measured with coils connected in series using an Agilent/HP 8753ES network analyzer or equivalent.
5. DC current at which the inductance drops 20% (typ) 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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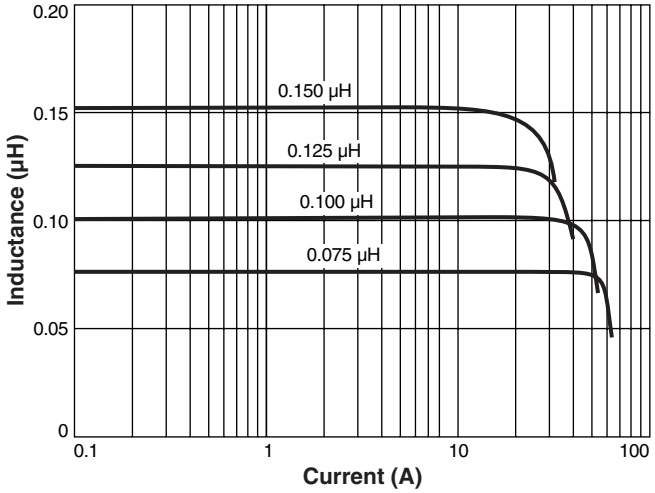
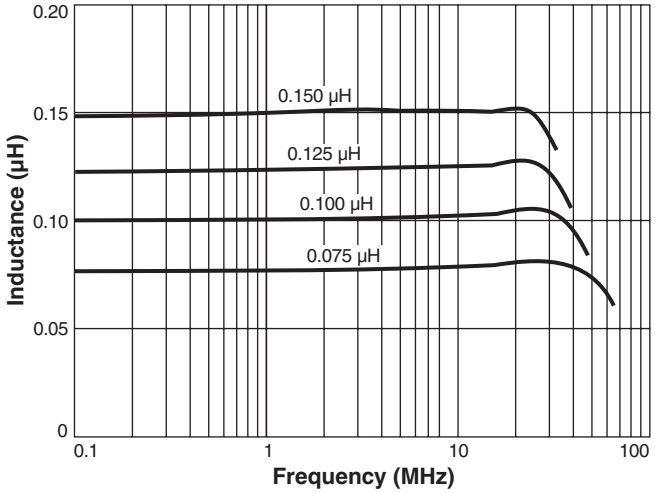
# SMT Power Inductors - SLC1049 Series

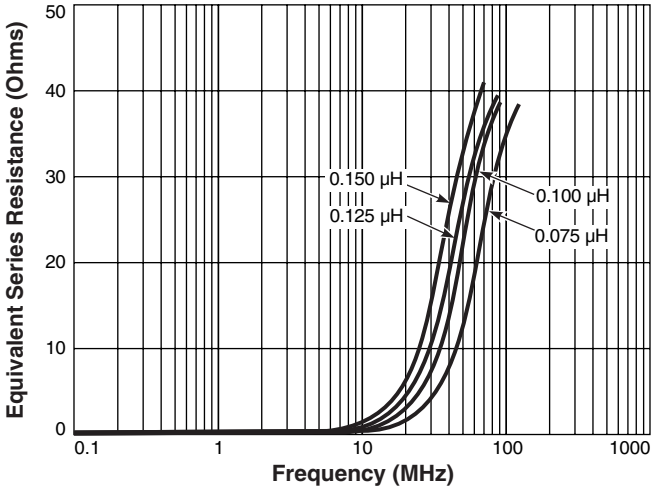
## L vs Current



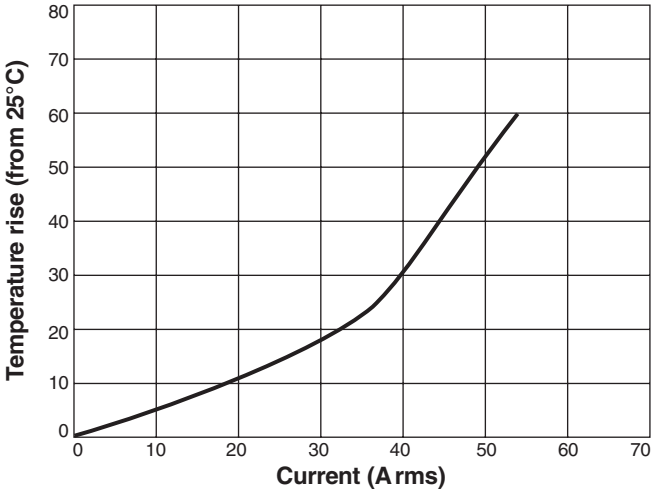

## L vs Frequency



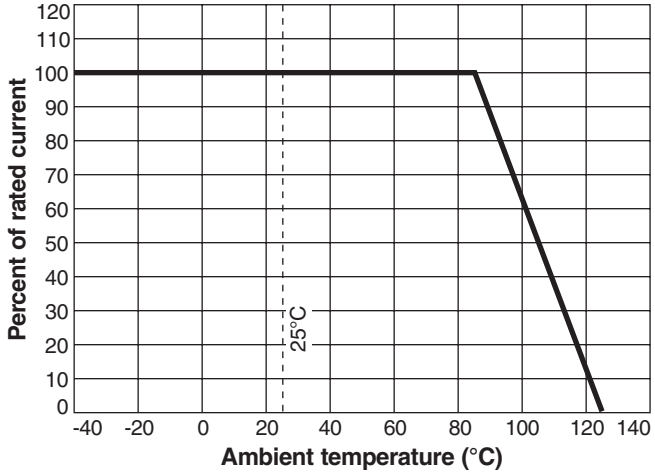

## ESR vs Frequency




## Typical Temperature Rise vs Current




## Irms Derating



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