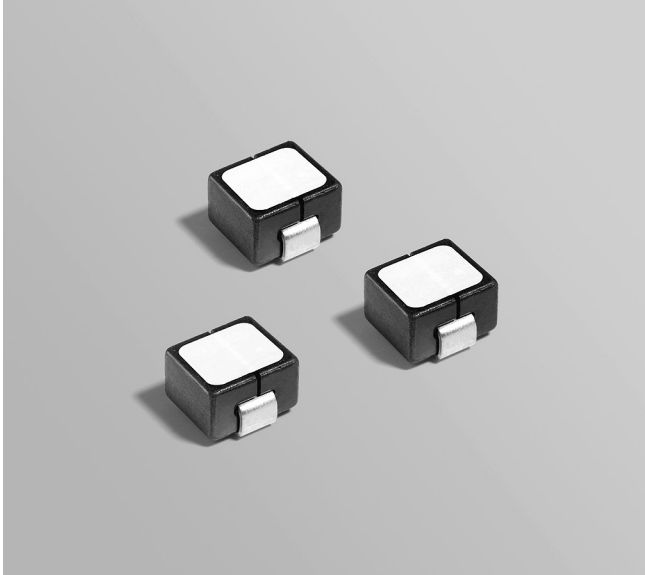




# Shielded Power Inductors – SLC7649



- Designed for use in multi-phase VRM/VRD regulators and high current/high frequency DC/DC converters.
- Requires only 60 mm<sup>2</sup> of board space; can handle up to 100A

**Core material** Ferrite

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

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

**Weight** 0.9 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: 16 mm wide, 0.35 mm thick, 12 mm pocket spacing, 5 mm pocket depth

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

Part number <sup>1</sup>	L ±10% <sup>2</sup> (nH)	DCR ±5% <sup>3</sup> (mOhms)	SRF typ <sup>4</sup> (MHz)	Isat <sup>5</sup> (A)	Irms <sup>6</sup> (A)
SLC7649S-360KL_	36	0.17	1150	100	39
SLC7649S-500KL_	50	0.17	900	84	39
SLC7649S-700KL_	70	0.17	750	65	39
SLC7649S-101KL_	100	0.17	110	42	39
SLC7649S-121KL_	120	0.17	78	33	39
SLC7649S-151KL_	150	0.17	67	27	39

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

**SLC7649S-101KLC**

**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 between the two points indicated on the dimensional drawing.

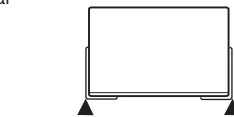
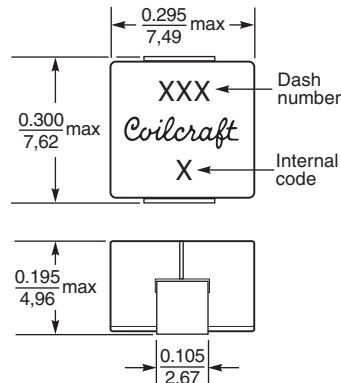
4. SRF measured using an Agilent/HP 8753ES network analyzer or equivalent.

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.

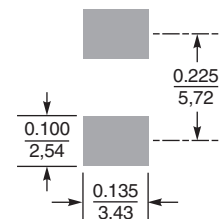
7. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



▲ Points used for measuring DCR

## Recommended Land Pattern



Dimensions are in  $\frac{\text{inches}}{\text{mm}}$



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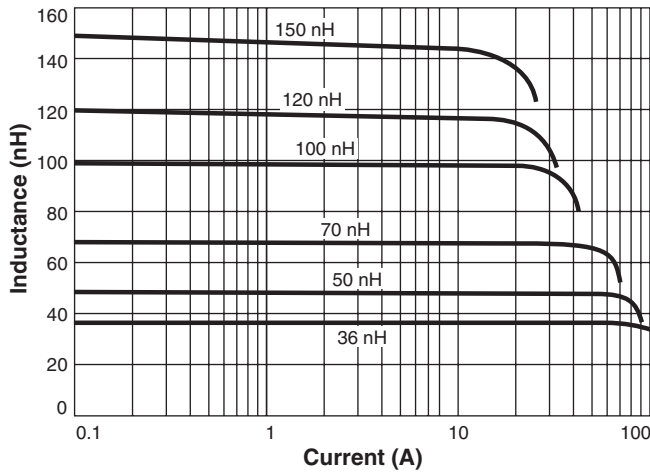
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

**SPICE models**  
ON OUR WEB SITE

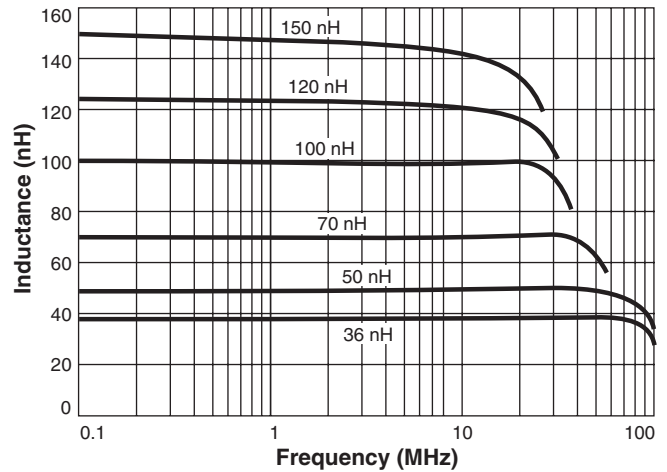


# SMT Power Inductors – SLC7649 Series

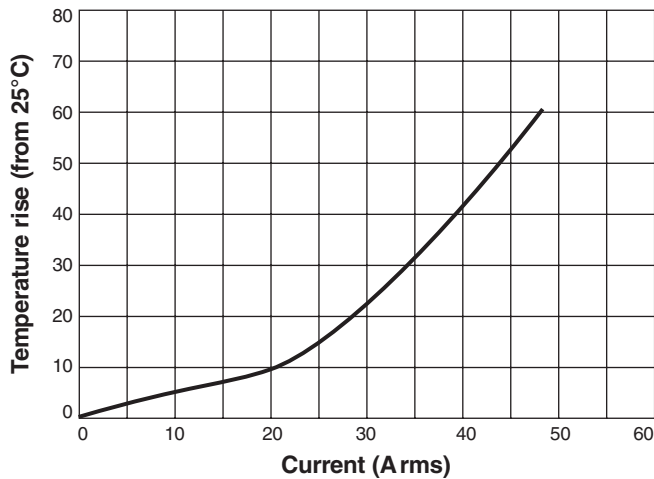
## L vs Current



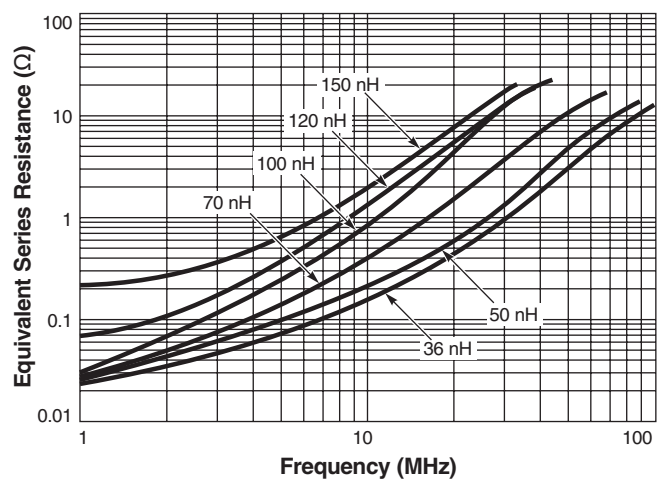
## L vs Frequency



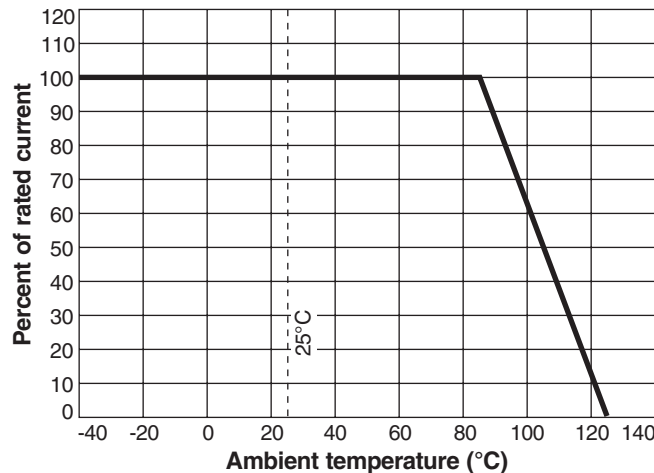
## Temperature Rise vs Current



## ESR vs Frequency



## Irms Derating



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