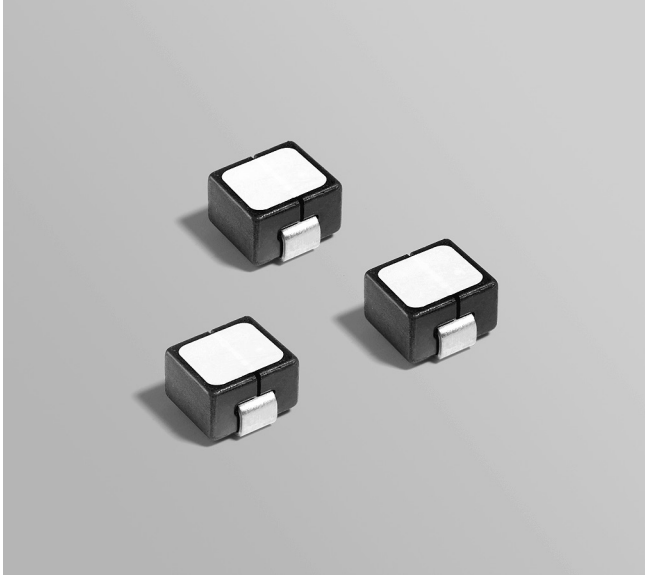




# Shielded Power Inductors – SLC7649



- 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 100 A

**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 (40°C rise) Irms current.

**Maximum part temperature** +125°C (ambient + temp rise). [Derating](#).

**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)

**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** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

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).

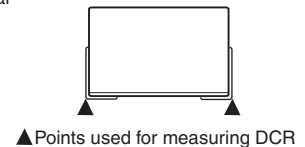
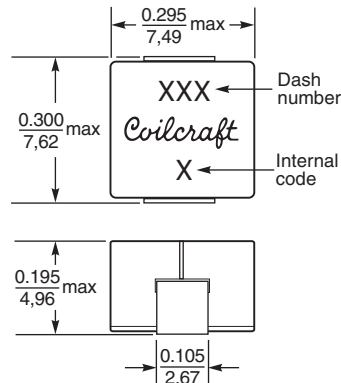
**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (250 per full reel).

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.

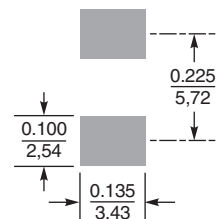
D = 13" machine-ready reel. EIA-481 embossed plastic tape (1000 per full reel). Factory order only, not stocked.

- Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4263B LCR meter or equivalent.
- DCR is measured between the two points indicated on the dimensional drawing.
- SRF measured using an Agilent/HP 8753ES network analyzer or equivalent.
- DC current at 25°C that causes a 20% (typ) inductance drop from its value without current. [Click for temperature derating information](#).
- Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information](#).
- Electrical specifications at 25°C.

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



## Recommended Land Pattern



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



[www.coilcraft.com](http://www.coilcraft.com)

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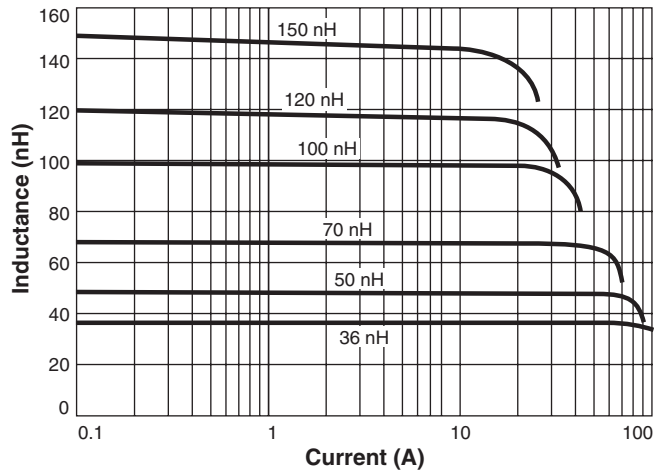
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**SPICE models**  
ON OUR WEB SITE

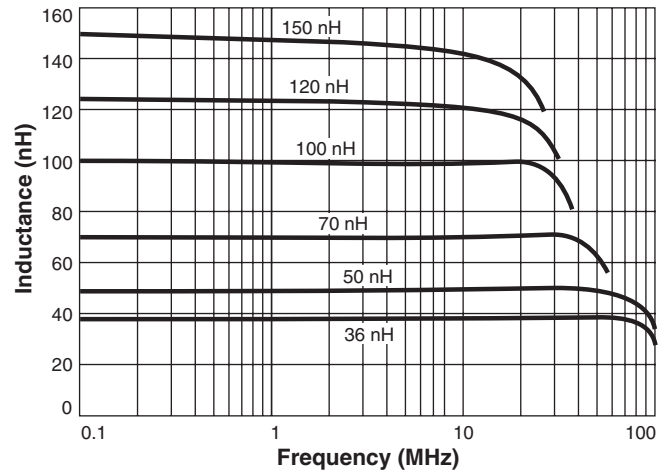


# Shielded Power Inductors – SLC7649 Series

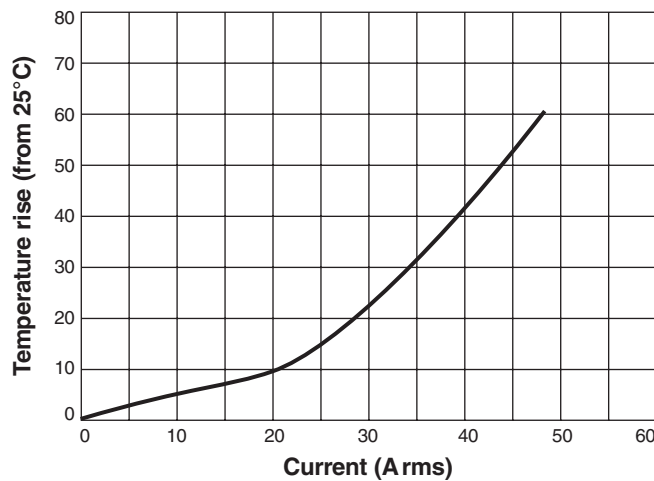
## L vs Current



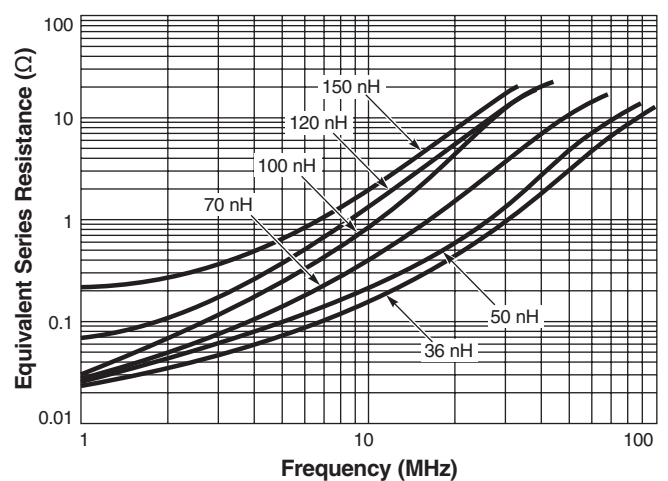
## L vs Frequency



## Temperature Rise vs Current



## ESR vs Frequency



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