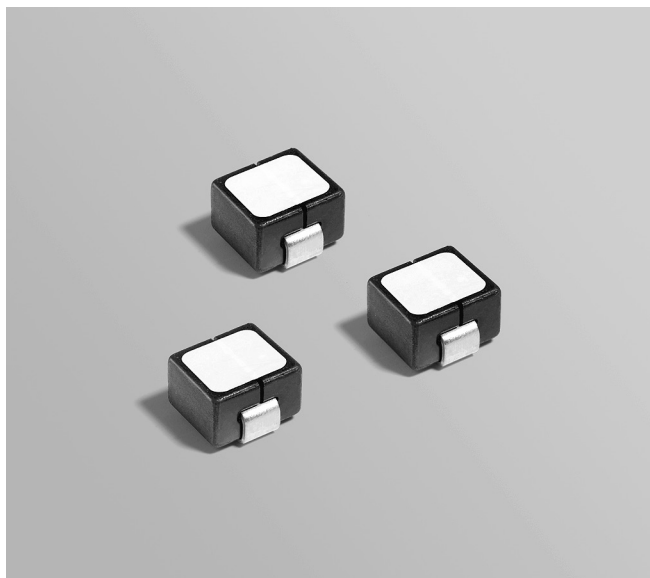




Shielded Power Inductors – SLC7649



- Designed for use in multi-phase VRM/VRD regulators and high current/high frequency DC/DC converters.
- Requires only 60 mm² of board space; can handle up to 100 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 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 ¹	L ±10% ² (nH)	DCR ±5% ³ (mOhms)	SRF typ ⁴ (MHz)	Isat ⁵ (A)	Irms ⁶ (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.

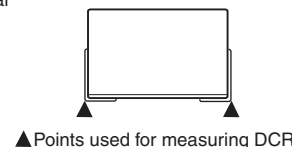
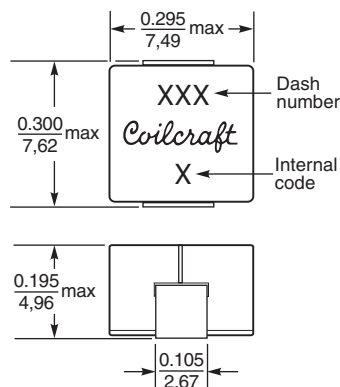
4. SRF measured using an Agilent/HP 8753ES network analyzer or equivalent.

5. DC current at which the inductance drops 20% (typ) from its value without current.

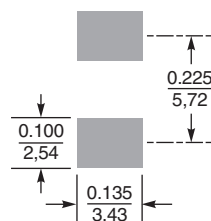
6. Current that causes a 40°C temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

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



Recommended Land Pattern

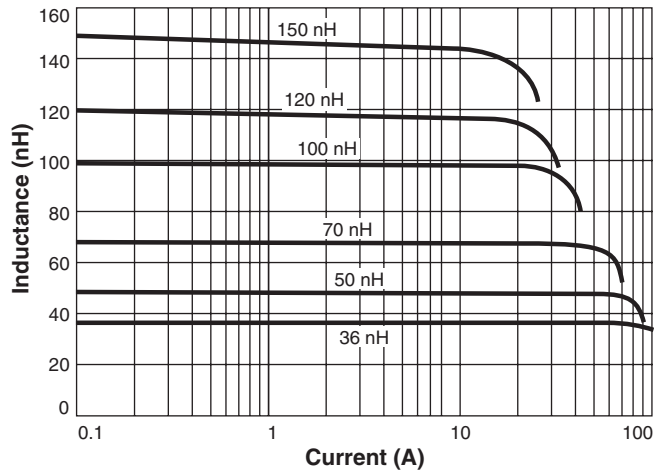


Dimensions are in $\frac{\text{inches}}{\text{mm}}$

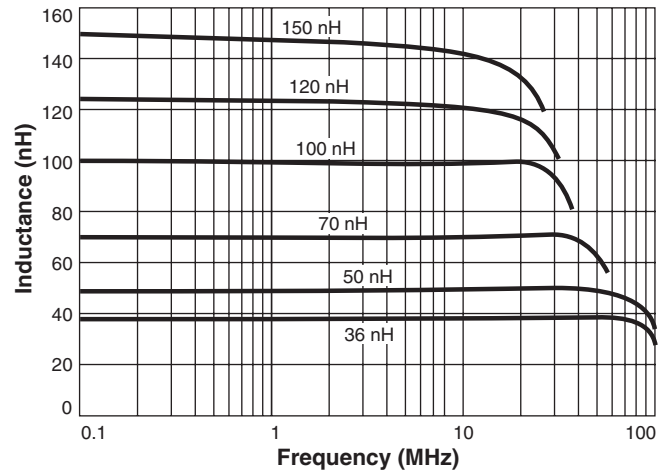


SMT Power Inductors – SLC7649 Series

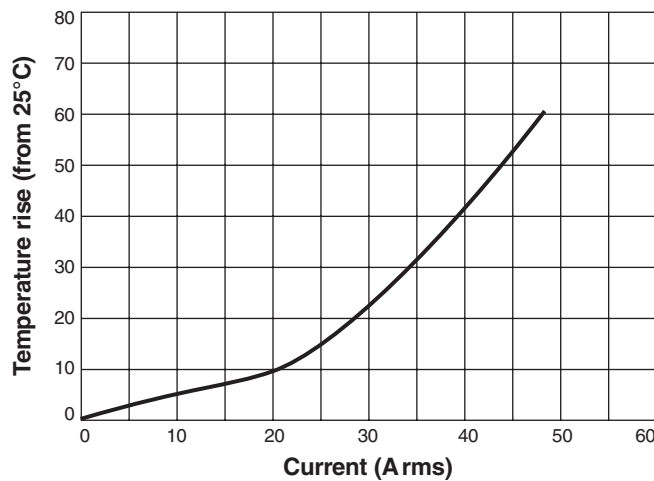
L vs Current



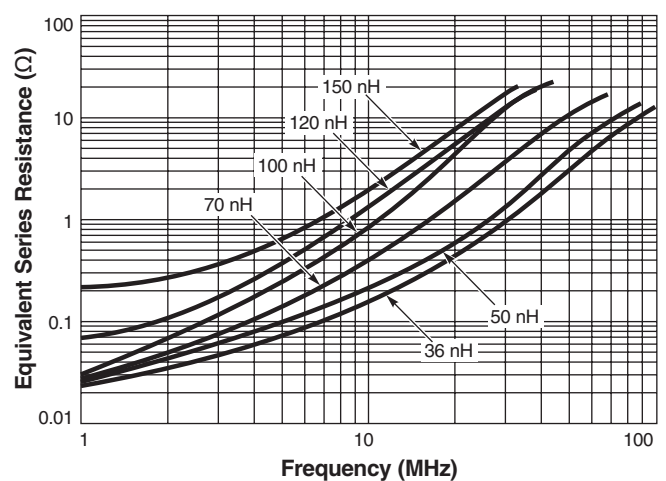
L vs Frequency



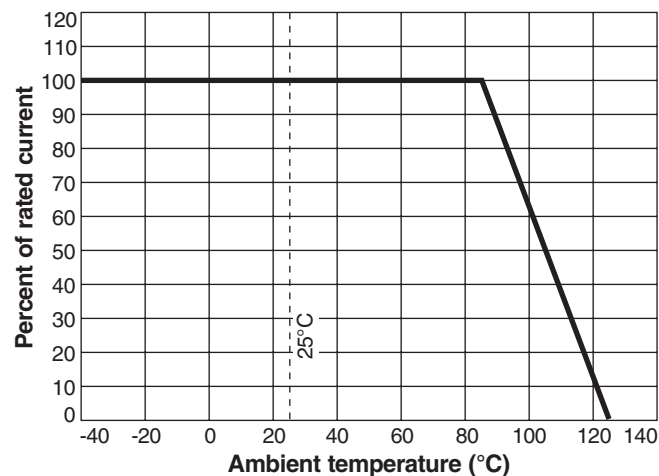
Temperature Rise vs Current



ESR vs Frequency



Irms Derating



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