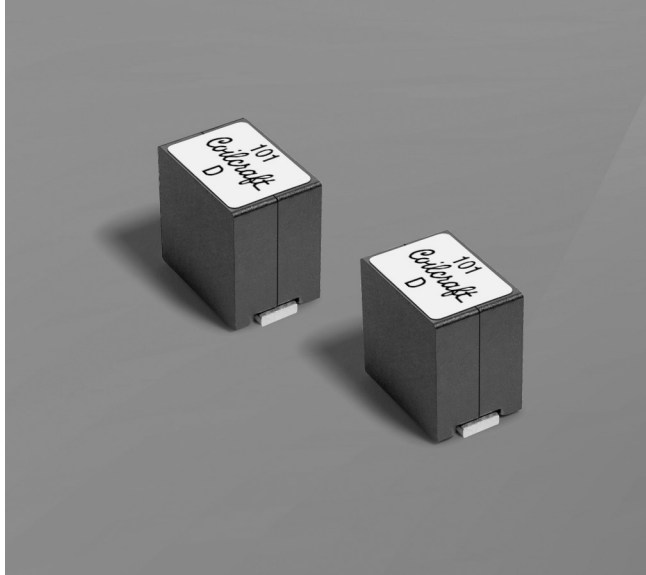


# Shielded Power Inductors – SLR7010



- Tight DCR tolerance for inductor-DCR-based current sensing circuits
- Excellent current handling
- 10 × 7 × 10 (L × W × H) mm surface mount package
- Designed for use in multi-phase VRM/VRD/EVRD regulators

**Core material** Ferrite

**Weight** 2.7 – 2.8 g

**Environmental** RoHS compliant, halogen free

**Terminations** RoHS compliant matte tin over nickel over copper.

**Ambient temperature** –40°C to +105°C with (40°C rise) Irms current.

**Maximum part temperature** +145°C (ambient + temp rise). [Derating](#).

**Storage temperature** Component: –40°C to +145°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)**

0.48 per billion hours / 2.08E+09 hours, calculated per Telcordia SR-332

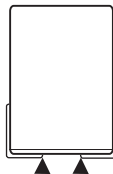
**Packaging** 400/13" reel; Plastic tape: 24 mm wide, 0.5 mm thick, 16 mm pocket spacing, 10.2 mm pocket depth. Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

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

| Part number    | Inductance <sup>1</sup><br>(nH) | DCR ±10% <sup>2</sup><br>(mOhms) | SRF typ<br>(MHz) | Isat (A) <sup>3</sup> |          |          | Irms (A) <sup>4</sup> |           |
|----------------|---------------------------------|----------------------------------|------------------|-----------------------|----------|----------|-----------------------|-----------|
|                |                                 |                                  |                  | at 25°C               | at 100°C | at 125°C | 20°C rise             | 40°C rise |
| SLR7010-101KED | 100±10%                         | 0.17                             | 222              | 113                   | 100      | 90       | 72                    | 92        |
| SLR7010-121KED | 120±10%                         | 0.17                             | 159              | 98                    | 84       | 80       | 72                    | 92        |
| SLR7010-151KED | 150±10%                         | 0.17                             | 150              | 75                    | 65       | 60       | 72                    | 92        |
| SLR7010-201KED | 200±10%                         | 0.17                             | 85               | 62                    | 46       | 42       | 72                    | 92        |
| SLR7010-251KED | 250±10%                         | 0.17                             | 88               | 44                    | 36       | 32       | 72                    | 92        |
| SLR7010-331LED | 330±15%                         | 0.17                             | 50               | 32                    | 26       | 22       | 72                    | 92        |

1. Inductance at 100 kHz, 0.1 Vrms, 0 Adc.

2. DCR is measured on a micro-ohmmeter at points indicated in the diagram below.



- DC current that causes an inductance drop of 20% (typ) from its value without current. [Click for temperature derating information](#).
- Current that causes the specified 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.

## Irms Testing

Irms testing was performed on 0.75 inch wide × 0.25 inch thick copper traces in still air.

Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.



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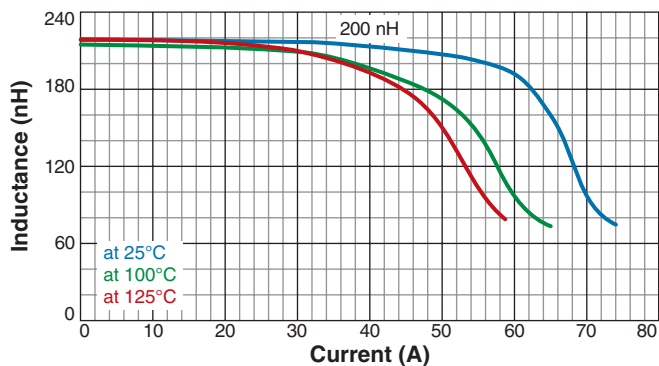
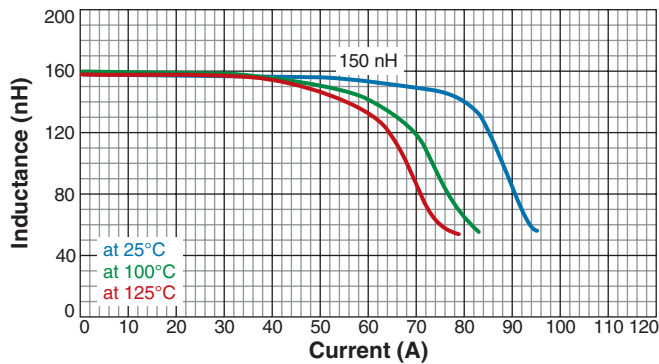
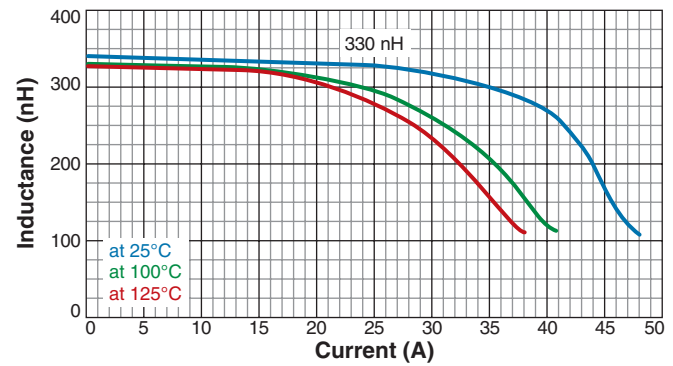
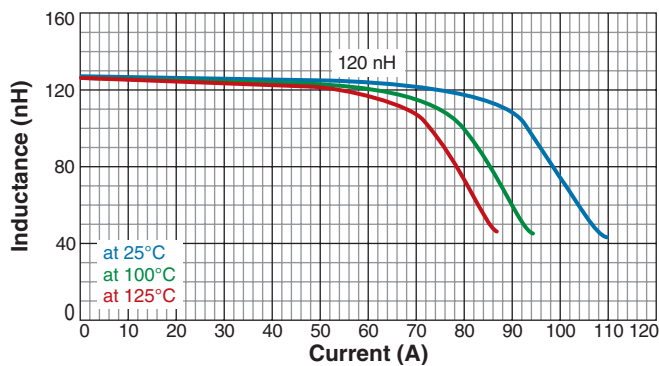
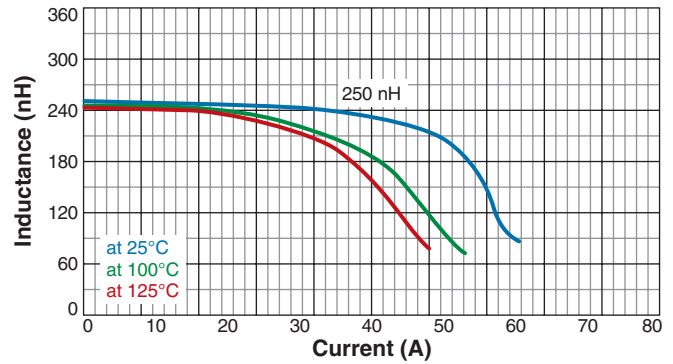
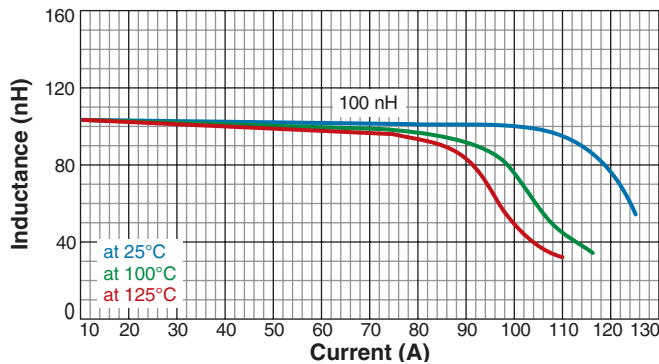
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# SLR7010 Shielded Power Inductors

## L vs Current



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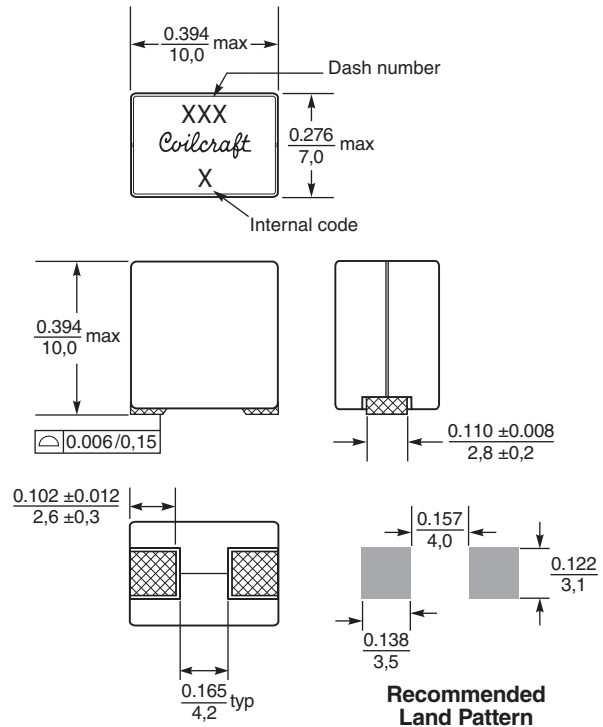
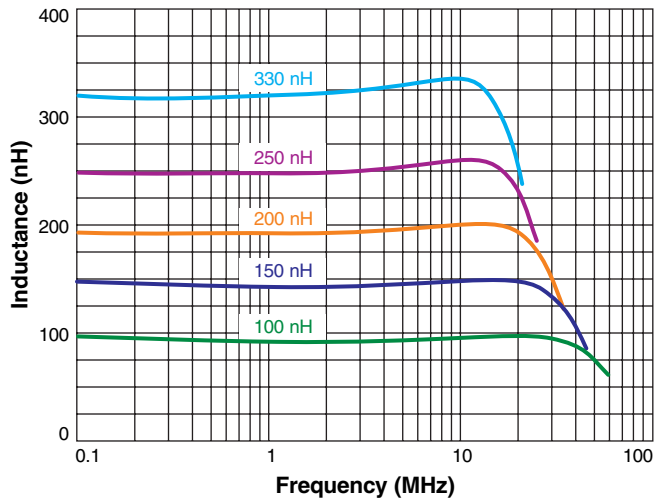
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# SLR7010 Shielded Power Inductors

## L vs Frequency



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

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