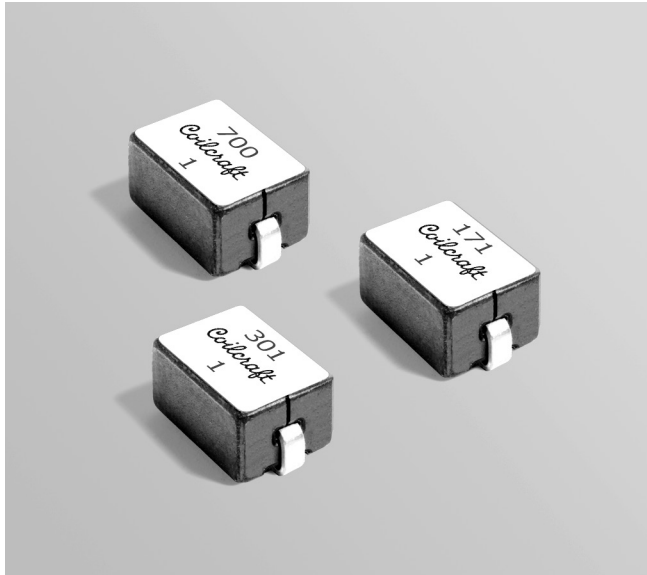


# Shielded Power Inductors – SLC1175



- Ideal for use in multi-phase VRM/VRD regulators and high current/high frequency DC/DC converters.
- Offers inductance values unavailable in other high current series.

**Designer's Kit C467** contains 3 each of select values.

**Core material** Ferrite

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

**Environment** RoHS compliant, halogen free

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

**Weight** 2.19 – 2.30 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** 150/7" reel, 700/13" reel; Plastic tape: 24 mm wide, 0.4 mm thick, 12 mm pocket spacing, 7.62 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> | Inductance <sup>2</sup><br>±20% (nH) | DCR (mOhms) <sup>3</sup> |       | SRF typ <sup>4</sup><br>(MHz) | Isat (A) <sup>5</sup> |          |          | Irms (A) <sup>6</sup> |           |
|--------------------------|--------------------------------------|--------------------------|-------|-------------------------------|-----------------------|----------|----------|-----------------------|-----------|
|                          |                                      | min                      | max   |                               | 10% drop              | 20% drop | 30% drop | 20°C rise             | 40°C rise |
| SLC1175-700ME_           | 70                                   | 0.228                    | 0.252 | 179                           | 83                    | 100      | >100     | 25.5                  | 35.5      |
| SLC1175-121ME_           | 120                                  | 0.228                    | 0.252 | 144                           | 80                    | 84       | 88       | 25.5                  | 35.5      |
| SLC1175-151ME_           | 150                                  | 0.228                    | 0.252 | 95                            | 64                    | 70       | 76       | 25.5                  | 35.5      |
| SLC1175-171ME_           | 170                                  | 0.228                    | 0.252 | 73                            | 54                    | 60       | 63       | 25.5                  | 35.5      |
| SLC1175-201ME_           | 200                                  | 0.228                    | 0.252 | 64                            | 48                    | 53       | 55       | 25.5                  | 35.5      |
| SLC1175-231ME_           | 230                                  | 0.228                    | 0.252 | 61                            | 41                    | 46       | 49       | 25.5                  | 35.5      |
| SLC1175-271ME_           | 270                                  | 0.228                    | 0.252 | 52                            | 32                    | 37       | 40       | 25.5                  | 35.5      |
| SLC1175-301ME_           | 300                                  | 0.228                    | 0.252 | 48                            | 27                    | 31       | 34       | 25.5                  | 35.5      |

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

**SLC1175-301MEC**

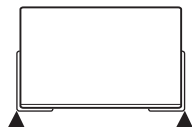
**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (150 per full reel).

**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. Factory order only, not stocked (700 per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms using an Agilent/HP 4284.

3. DCR is measured between the two points indicated below.



▲ Points used for measuring DCR

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

5. DC current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information](#).

6. 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](#).

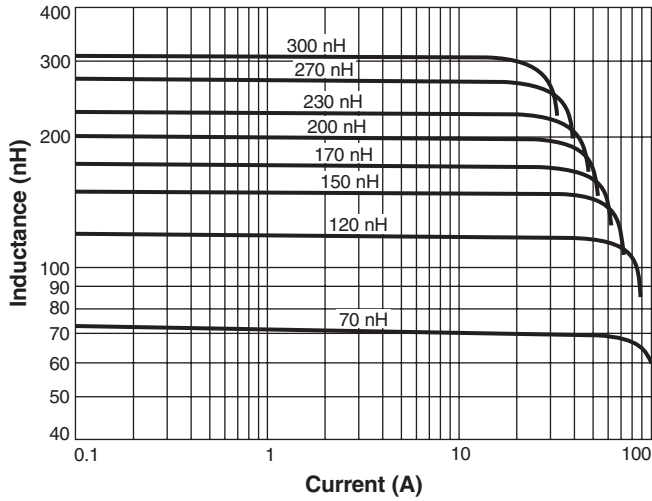
7. Electrical specifications at 25°C.

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

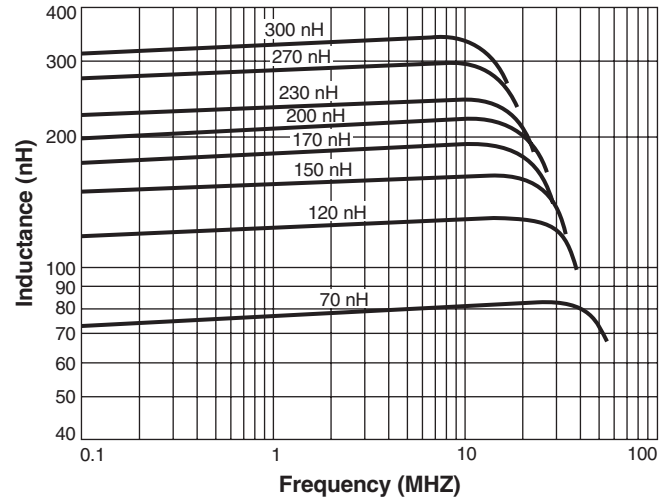


# Shielded Power Inductors – SLC1175 Series

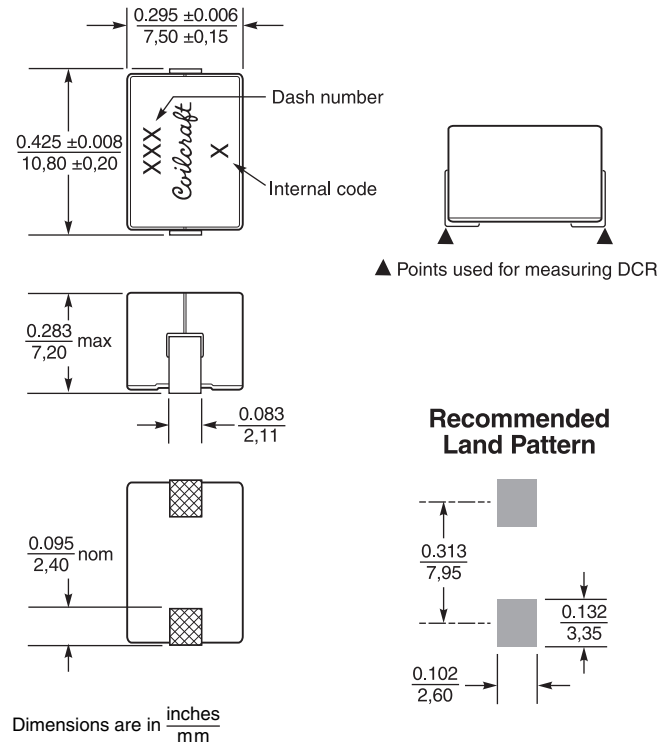
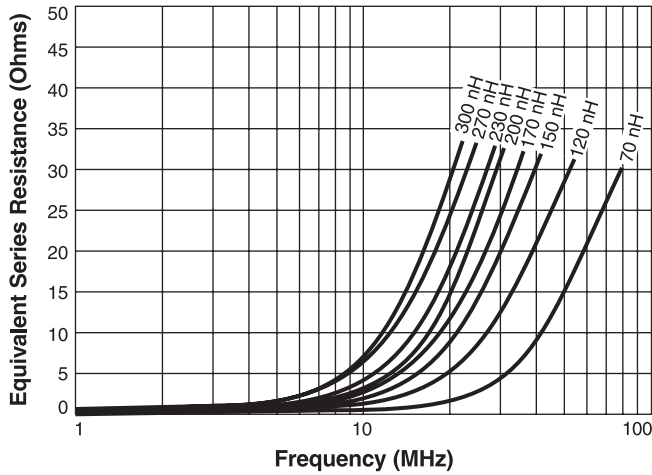
## L vs Current



## L vs Frequency



## ESR vs Frequency



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