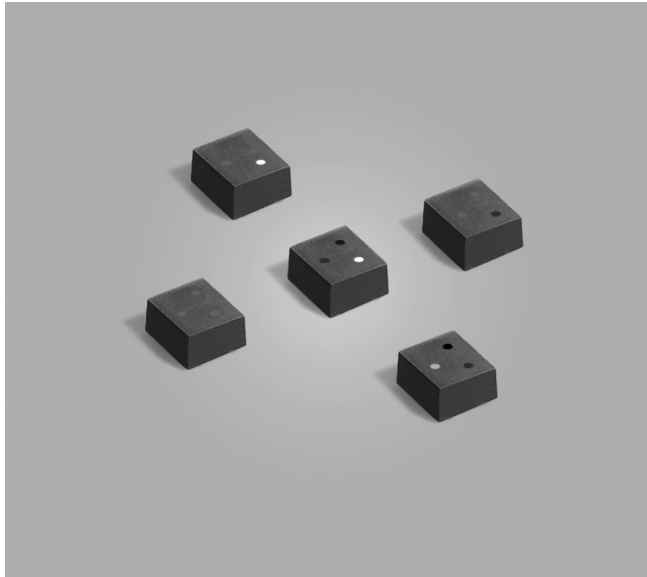


# Shielded Power Inductors – EPL3015



- Low profile shielded power inductors, 3 × 3 × 1.5 mm
- Very low DCR, high SRF ratings, Isat ratings up to 2.4 A

**Designer's Kit C405** contains 5 each of all values

**Core material** Ferrite

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

**Environmental** RoHS compliant, halogen free

**Terminations** RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum. Other terminations available at additional cost.

**Weight** 45 – 51 mg

**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** 2000/7" reel; 7500/13" reel Plastic tape: 8 mm wide, 0.2 mm thick, 4 mm pocket spacing, 1.78 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% (µH) | DCR (Ohms) <sup>3</sup> |       | SRF typ <sup>4</sup><br>(MHz) | Isat (A) <sup>5</sup> |          |          | Irms (A) <sup>6</sup> |           |
|--------------------------|--------------------------------------|-------------------------|-------|-------------------------------|-----------------------|----------|----------|-----------------------|-----------|
|                          |                                      | nom                     | max   |                               | 10% drop              | 20% drop | 30% drop | 20°C rise             | 40°C rise |
| EPL3015-901ML_           | 0.90                                 | 0.048                   | 0.055 | 130                           | 1.20                  | 1.90     | 2.40     | 1.85                  | 2.45      |
| EPL3015-122ML_           | 1.2                                  | 0.054                   | 0.062 | 105                           | 1.00                  | 1.60     | 2.05     | 1.80                  | 2.40      |
| EPL3015-152ML_           | 1.5                                  | 0.062                   | 0.072 | 100                           | 0.90                  | 1.40     | 1.90     | 1.55                  | 2.05      |
| EPL3015-222ML_           | 2.2                                  | 0.082                   | 0.094 | 75                            | 0.75                  | 1.20     | 1.60     | 1.50                  | 2.00      |
| EPL3015-332ML_           | 3.3                                  | 0.108                   | 0.124 | 55                            | 0.65                  | 1.10     | 1.40     | 1.20                  | 1.70      |
| EPL3015-472ML_           | 4.7                                  | 0.145                   | 0.167 | 50                            | 0.55                  | 0.90     | 1.20     | 1.00                  | 1.40      |
| EPL3015-682ML_           | 6.8                                  | 0.194                   | 0.223 | 38                            | 0.45                  | 0.75     | 1.00     | 0.90                  | 1.20      |
| EPL3015-103ML_           | 10                                   | 0.301                   | 0.346 | 32                            | 0.35                  | 0.59     | 0.81     | 0.76                  | 1.00      |
| EPL3015-153ML_           | 15                                   | 0.435                   | 0.500 | 26                            | 0.24                  | 0.43     | 0.62     | 0.61                  | 0.82      |
| EPL3015-223ML_           | 22                                   | 0.576                   | 0.662 | 20                            | 0.21                  | 0.36     | 0.51     | 0.56                  | 0.74      |
| EPL3015-333ML_           | 33                                   | 0.860                   | 0.989 | 15.5                          | 0.19                  | 0.32     | 0.45     | 0.44                  | 0.59      |

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

EPL3015-333MLC

**Packaging: C** = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 parts 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 (7500 parts per full reel).

2. Inductance tested at 1 MHz, 0.1 Vrms, 0 Adc.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using Agilent/HP 4395A 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.



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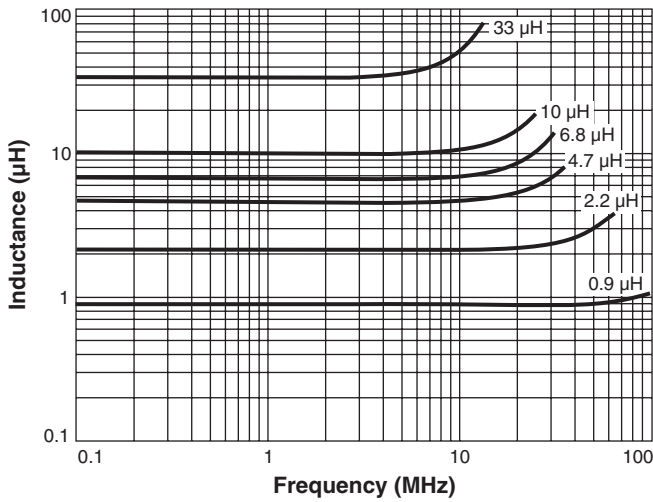
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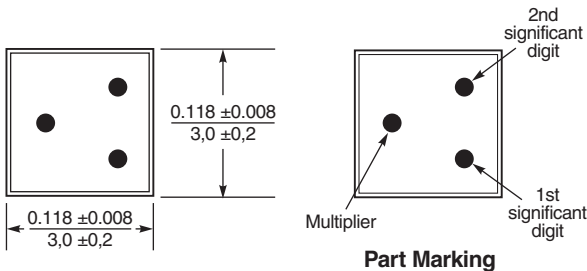
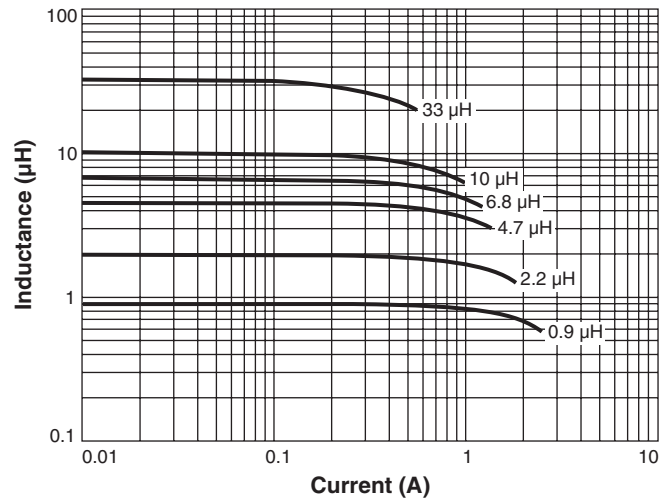


# Shielded Power Inductors – EPL3015 Series

## Typical L vs Frequency



## Typical L vs Current

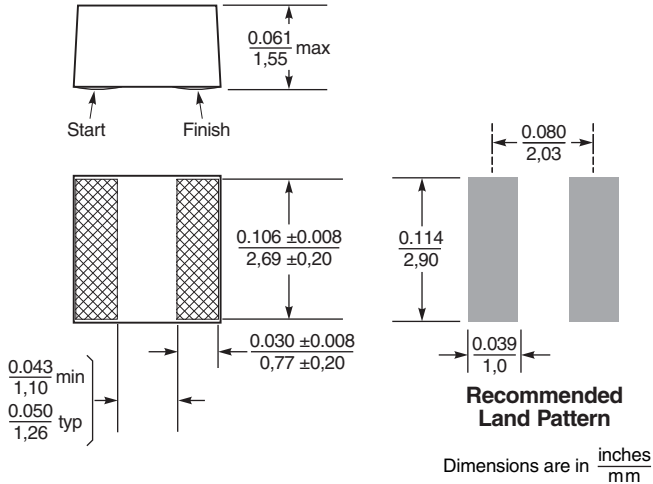


Part Marking

## Part Marking (Parts manufactured prior to Sept. 15, 2009 may not be marked.)

| Part number | Value   | 1st digit | 2nd digit | Multiplier |
|-------------|---------|-----------|-----------|------------|
| EPL3015-901 | 0.90 µH | White     | Black     | Brown      |
| EPL3015-122 | 1.2 µH  | Brown     | Red       | Red        |
| EPL3015-152 | 1.5 µH  | Brown     | Green     | Red        |
| EPL3015-222 | 2.2 µH  | Red       | Red       | Red        |
| EPL3015-332 | 3.3 µH  | Orange    | Orange    | Red        |
| EPL3015-472 | 4.7 µH  | Yellow    | Violet    | Red        |
| EPL3015-682 | 6.8 µH  | Blue      | Gray      | Red        |
| EPL3015-103 | 10 µH   | Brown     | Black     | Orange     |
| EPL3015-153 | 15 µH   | Brown     | Green     | Orange     |
| EPL3015-223 | 22 µH   | Red       | Red       | Orange     |
| EPL3015-333 | 33 µH   | Orange    | Orange    | Orange     |

Note: All marked parts have three dots. Black dot, used only on -901 and -103 as second significant digit, may be very difficult to see.



Recommended Land Pattern

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

Small surface blemishes are not unusual and do not adversely affect performance. Wire may be visible inside the voids.

Acceptable void sizes:

Top: 0.01 in / 0,254 mm × 0.01 in / 0,254 mm

Sides: 0.02 in / 0,5 mm × 0.047 in / 1,2 mm



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