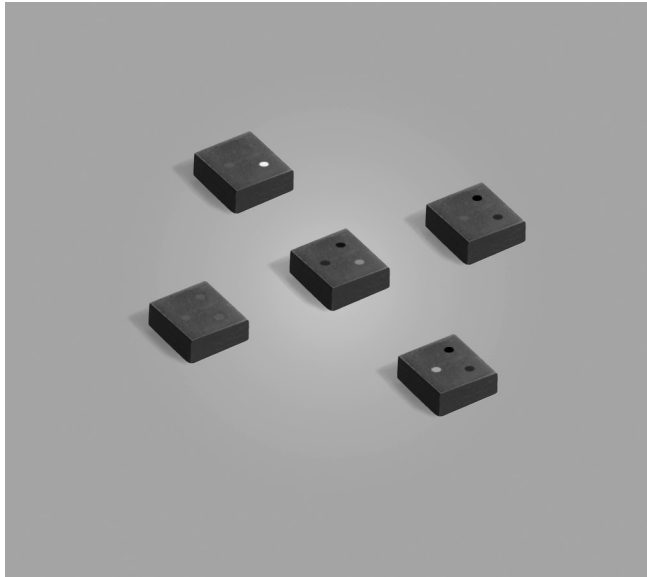


# Shielded Power Inductors – EPL3010



- Low profile shielded power inductors, 3 × 3 × 1 mm
- Extremely low DCR, high SRF ratings, Isat ratings up to 2.2 A

**Designer's Kit C431** 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** 32 – 38 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, 0.20 mm thick, 4 mm pocket spacing, 1.14 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> ±20% (µH)	DCR nom <sup>3</sup> (Ohms)	DCR max <sup>3</sup> (Ohms)	SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
					10% drop	20% drop	30% drop	20°C rise	40°C rise
EPL3010-301ML_	0.30	0.040	0.045	249	1.0	1.6	2.2	1.7	2.2
EPL3010-102ML_	1.0	0.071	0.078	151	0.80	1.3	1.8	1.2	1.7
EPL3010-152ML_	1.5	0.086	0.095	116	0.68	1.1	1.6	1.2	1.6
EPL3010-222ML_	2.2	0.137	0.150	98	0.54	0.92	1.3	0.98	1.3
EPL3010-472ML_	4.7	0.278	0.306	60	0.36	0.61	0.80	0.74	0.99
EPL3010-103ML_	10	0.573	0.631	38	0.20	0.34	0.48	0.52	0.70
EPL3010-223ML_	22	1.25	1.38	27	0.18	0.30	0.42	0.35	0.47

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

**EPL3010-103MLC**

**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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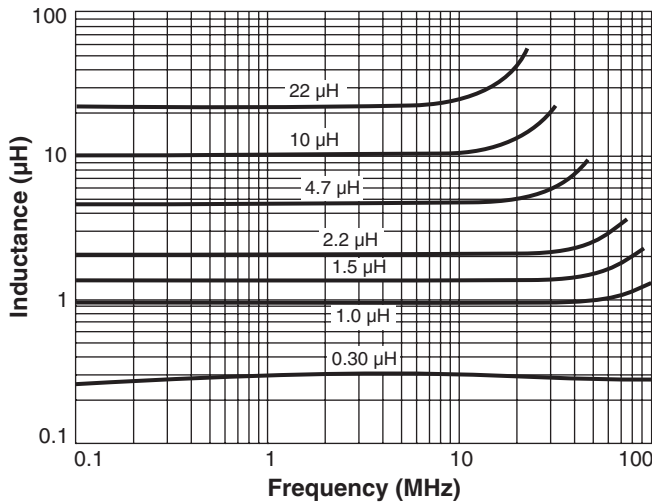
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

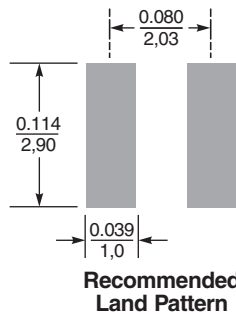
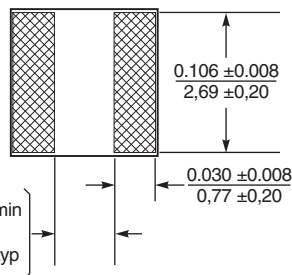
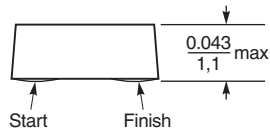
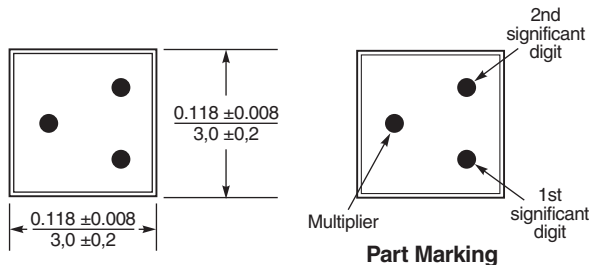
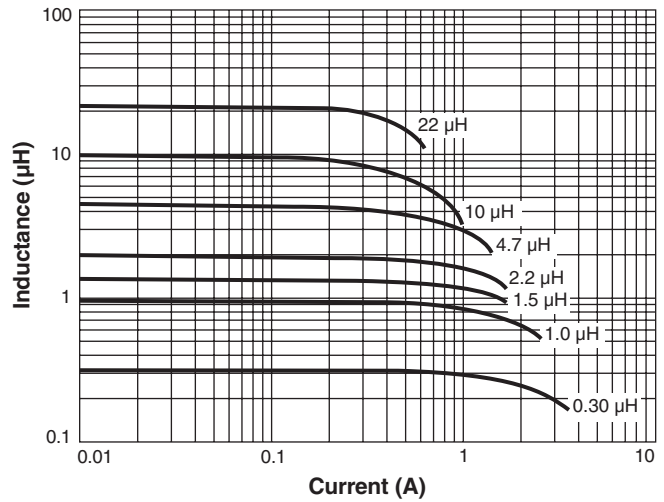


# SMT Power Inductors – EPL3010 Series

## L vs Frequency



## L vs Current



## Part Marking (Parts manufactured prior to Oct. 20, 2009 may not be marked.)

Part number	Value	1st digit	2nd digit	Multiplier
EPL3010-301	0.27 µH	Orange	Black	Brown
EPL3010-102	1.0 µH	Brown	Black	Red
EPL3010-152	1.5 µH	Brown	Green	Red
EPL3010-222	2.2 µH	Red	Red	Red
EPL3010-472	4.7 µH	Yellow	Violet	Red
EPL3010-103	10 µH	Brown	Black	Orange
EPL3010-223	22 µH	Red	Red	Orange

Note: All marked parts have three dots. Black dot, used only on -301, -102 and -103 as second significant digit, may be very difficult to see.

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

For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.005 inch / 0.13 mm.



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