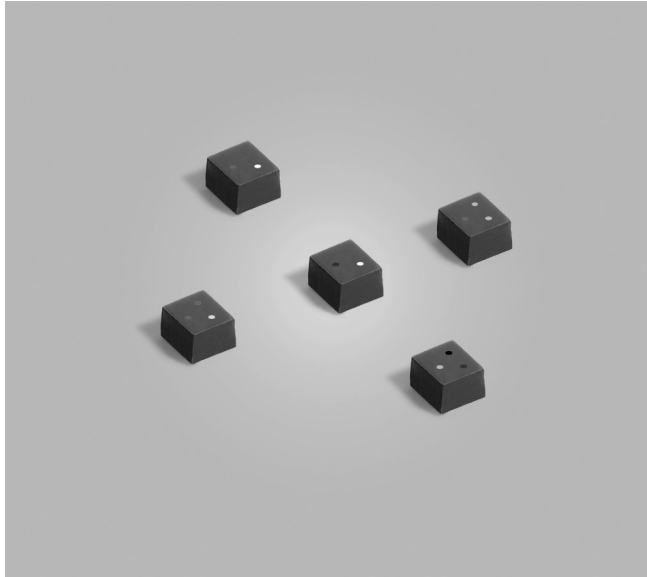


Shielded Power Inductors – EPL2014



- Extremely low DCR and very high SRF ratings
- Isat ratings as high as 2.8 A

Designer's Kit C413 contains 5 each of all values

Core material Ferrite

Environmental RoHS compliant, halogen free

Terminations Since March, 2009: RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum. Prior to March, 2009: RoHS compliant tin-silver-copper over gold over nickel over silver-platinum.

Weight 20 – 25 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)

Packaging 2000/7" reel; 7500/13" reel Plastic tape: 8 mm wide, 0.28 mm thick, 4 mm pocket spacing, 1.65 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

Part number ¹	Inductance ² ±20% (µH)	DCR (Ohms) ³		SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶	
		nom	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
EPL2014-271ML_	0.27	0.030	0.036	570	1.50	2.30	2.80	2.04	2.73
EPL2014-301ML_	This part number has been changed to EPL2014-271. The EPL2014-301 is not available								
EPL2014-421ML_	0.42	0.037	0.044	438	1.40	2.00	2.40	1.93	2.57
EPL2014-471ML_	This part number has been changed to EPL2014-421. The EPL2014-471 is not available								
EPL2014-601ML_	0.60	0.043	0.052	290	1.20	1.80	2.25	1.83	2.43
EPL2014-821ML_	0.82	0.051	0.061	163	0.950	1.40	1.75	1.49	2.03
EPL2014-102ML_	1.0	0.059	0.071	153	0.900	1.30	1.68	1.43	1.94
EPL2014-152ML_	1.5	0.075	0.086	109	0.720	1.20	1.60	1.34	1.86
EPL2014-222ML_	2.2	0.120	0.132	80	0.600	0.980	1.30	1.07	1.42
EPL2014-332ML_	3.3	0.152	0.167	62	0.540	0.800	1.10	0.923	1.23
EPL2014-472ML_	4.7	0.231	0.254	46	0.380	0.650	0.880	0.788	1.06
EPL2014-682ML_	6.8	0.287	0.316	44	0.350	0.590	0.800	0.676	0.915
EPL2014-822ML_	8.2	0.378	0.416	39	0.290	0.500	0.680	0.640	0.849
EPL2014-103ML_	10	0.440	0.459	33	0.250	0.450	0.600	0.564	0.729

1. When ordering, please specify **termination** and **packaging** codes:

EPL2014-103MLC

Termination: **L** = RoHS compliant tin-silver-copper over tin over nickel
Special order, added cost: **S** = non-RoHS tin-lead (63/37).

Packaging: **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (7500 parts per full reel).

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

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.

SPICE models
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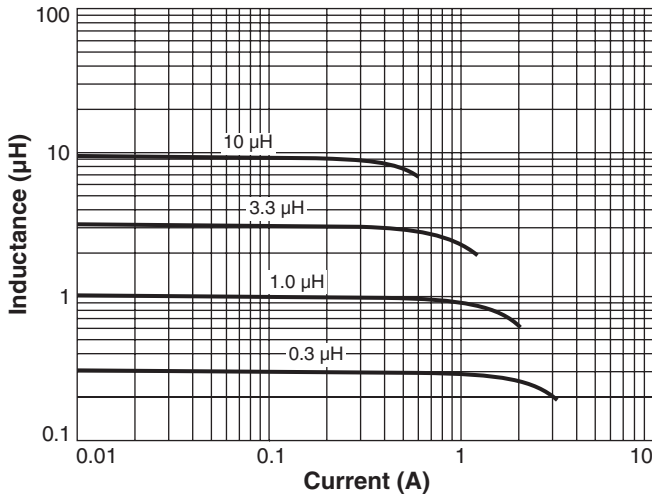
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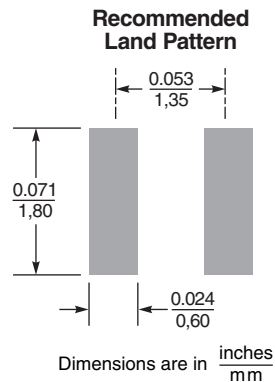
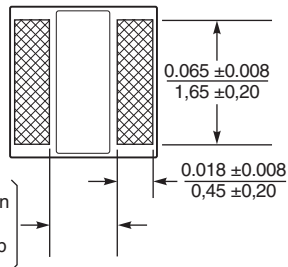
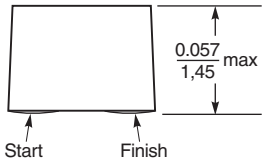
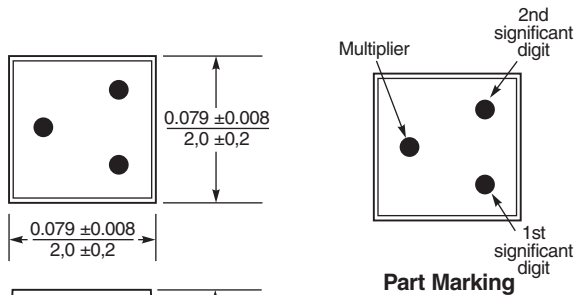
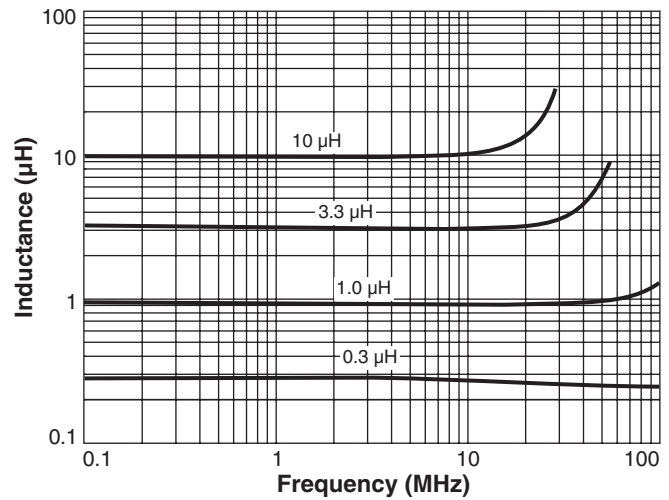


SMT Power Inductors – EPL2014 Series

Typical L vs Current



Typical L vs Frequency



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

Part number	Value	1st digit	2nd digit	Multiplier
EPL2014-271	0.27 µH	Red	Violet	Brown
EPL2014-421	0.42 µH	Yellow	Red	Brown
EPL2014-601	0.60 µH	Blue	Black	Brown
EPL2014-821	0.82 µH	Gray	Red	Brown
EPL2014-102	1.0 µH	Brown	Black	Red
EPL2014-152	1.5 µH	Brown	Green	Red
EPL2014-222	2.2 µH	Red	Red	Red
EPL2014-332	3.3 µH	Orange	Orange	Red
EPL2014-472	4.7 µH	Yellow	Violet	Red
EPL2014-682	6.8 µH	Blue	Gray	Red
EPL2014-822	8.2 µH	Gray	Red	Red
EPL2014-103	10 µH	Brown	Black	Orange

Note: All marked parts have three dots. Black dot, used only on -601, -102 and -103 as second significant digit, may be very difficult to see.

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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Document 583-2 Revised 12/29/12

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