

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)

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, 0.28 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).

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 100 kHz, 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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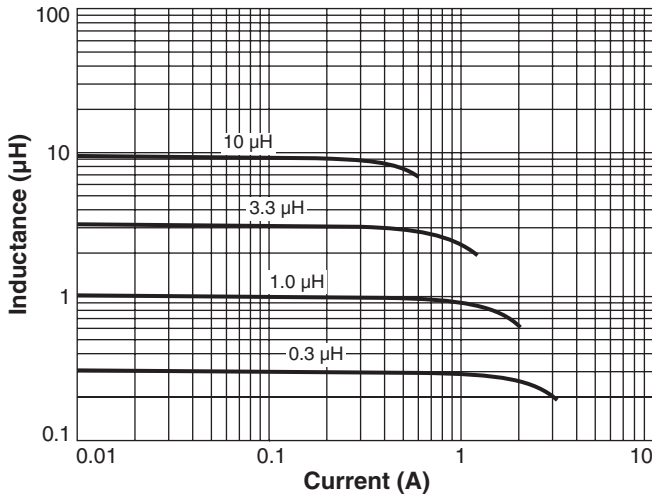
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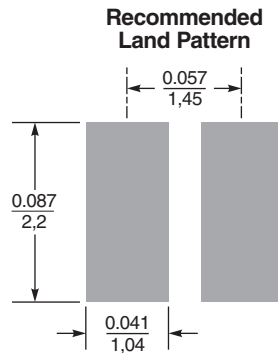
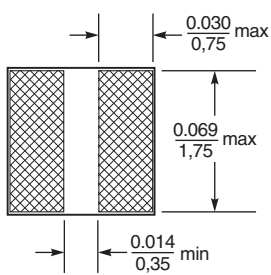
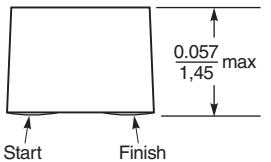
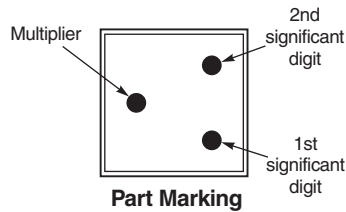
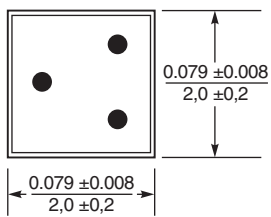
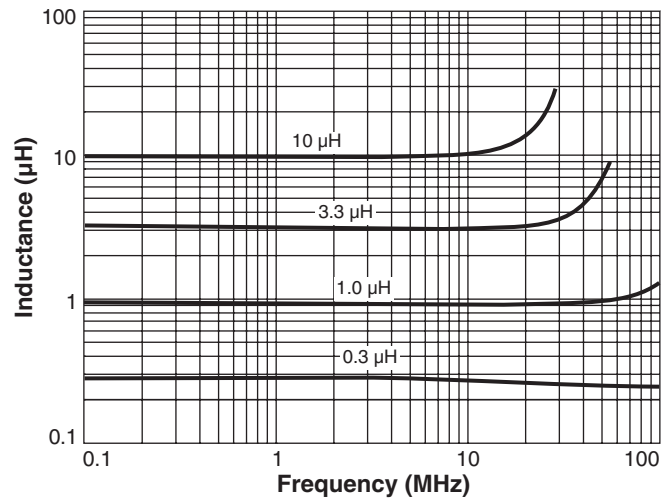


SMT Power Inductors – EPL2014 Series

Typical L vs Current



Typical L vs Frequency



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

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.



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