



# 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 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 Irms current, +85°C to +125°C with derated current

**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** Only pure water or alcohol recommended

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR (Ohms) <sup>3</sup>		SRF typ <sup>4</sup> (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
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 which the inductance drops from its value without current.

6. Current that causes the specified temperature rise from 25°C ambient.

7. Electrical specifications at 25°C.

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

**SPICE models**  
ON OUR WEB SITE



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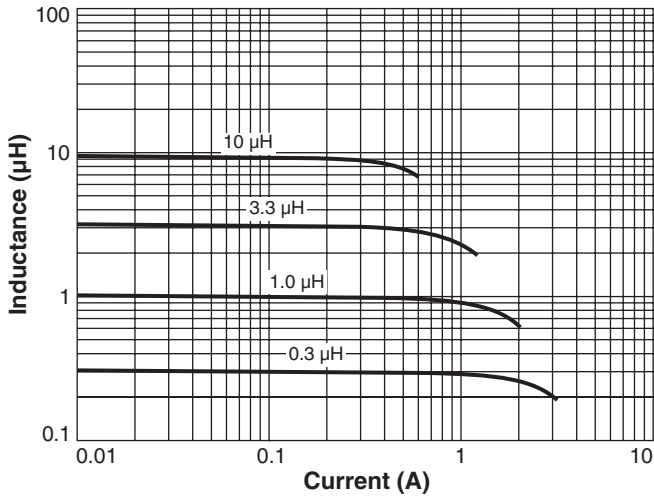
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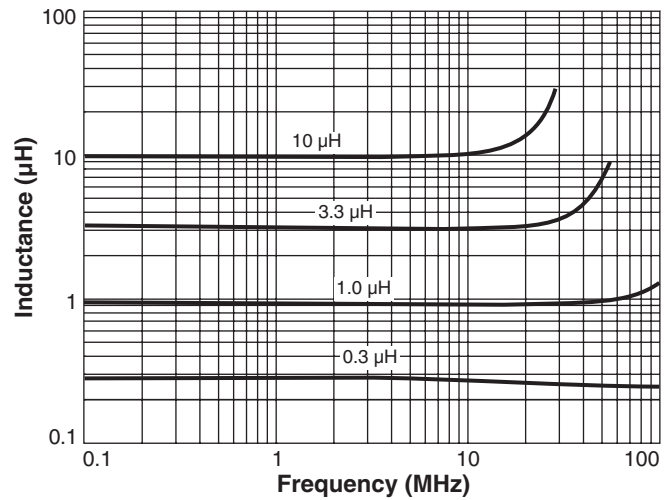


# SMT Power Inductors – EPL2014 Series

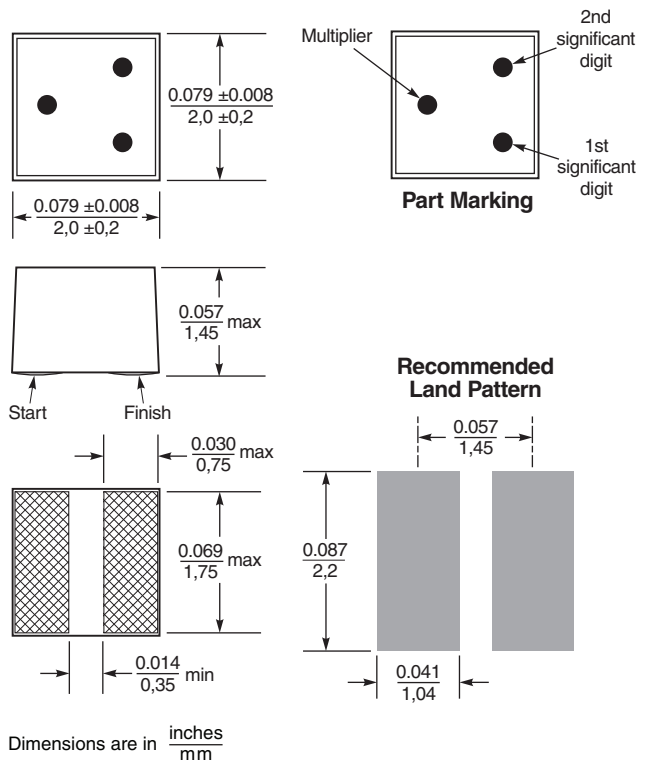
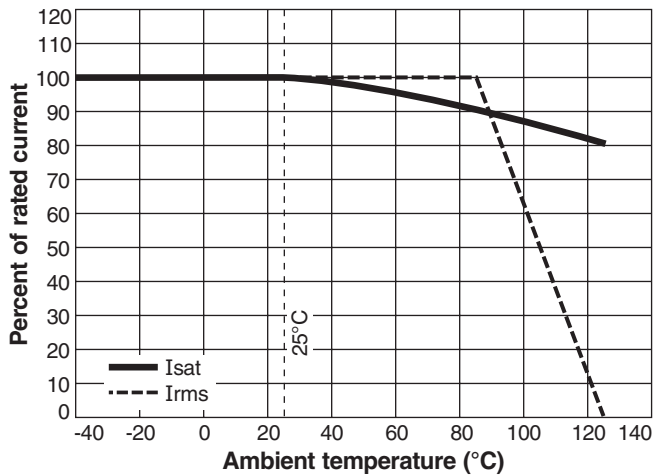
## Typical L vs Current



## Typical L vs Frequency



## Current Derating



## 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



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