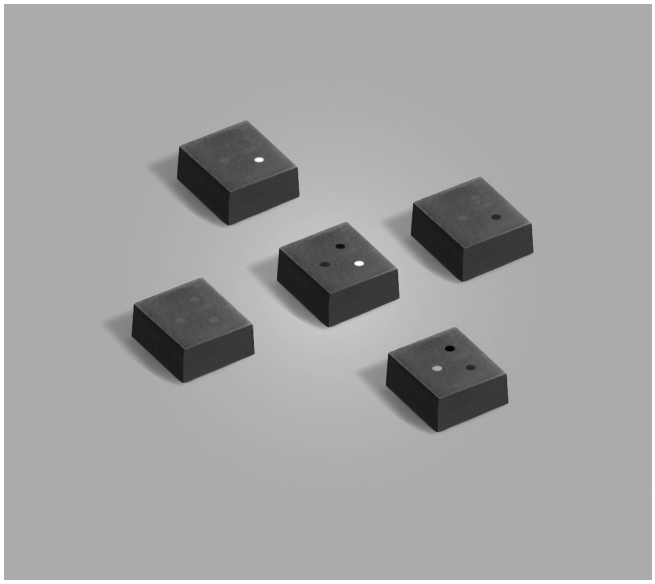
Shielded Power Inductors – EPL3314



- Small footprint, very low profile shielded power inductor
- Extremely low DCR, Isat ratings as high as 2.3 A

Core material Ferrite
Core and winding loss See 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 53 – 60 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)
Mean Time Between Failures (MTBF) 26,315,789 hours
Packaging 2000/7″ reel; 7500/13″ reel Plastic tape: 12 mm wide, 0.20 mm thick, 8 mm pocket spacing, 1.55 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] nom	DCR (Ohms)[3] max	SRF typ[4] (MHz)	Isat (A)[5] 10% drop	Isat (A)[5] 20% drop	Isat (A)[5] 30% drop	Irms (A)[6] 20°C rise	Irms (A)[6] 40°C rise
EPL3314-102ML_	1.0	0.052	0.060	125	1.1	1.8	2.3	1.9	2.5
EPL3314-222ML_	2.2	0.082	0.094	80	0.70	1.2	1.6	1.5	2.0
EPL3314-332ML_	3.3	0.116	0.133	60	0.60	1.0	1.4	1.3	1.7
EPL3314-472ML_	4.7	0.139	0.160	52	0.55	0.87	1.2	1.2	1.6
EPL3314-822ML_	8.2	0.252	0.290	37	0.35	0.58	0.82	0.84	1.1
EPL3314-103ML_	10	0.313	0.360	35	0.32	0.56	0.77	0.78	1.0
EPL3314-153ML_	15	0.408	0.469	25	0.27	0.47	0.66	0.67	0.89
EPL3314-473ML_	47	1.087	1.246	12.5	0.16	0.24	0.35	0.40	0.53

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

EPL3314-473MLC

Packaging: C = 7″ machine-ready reel. EIA-481 embossed plastic tape (2000 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 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.

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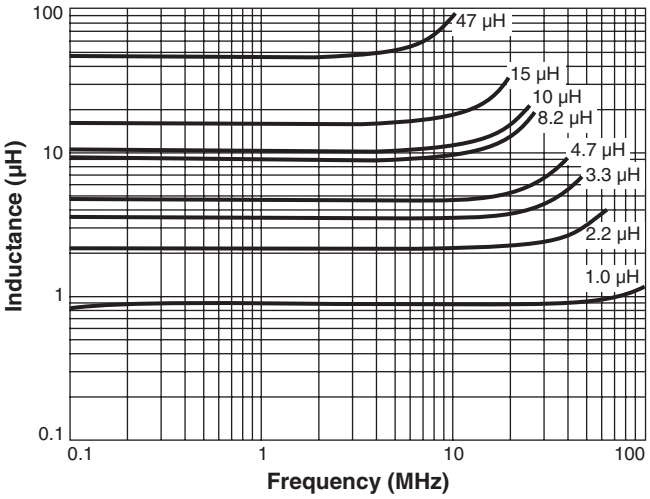
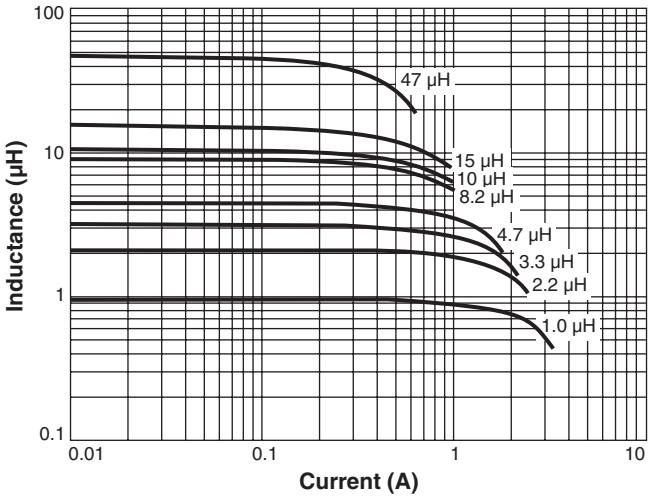
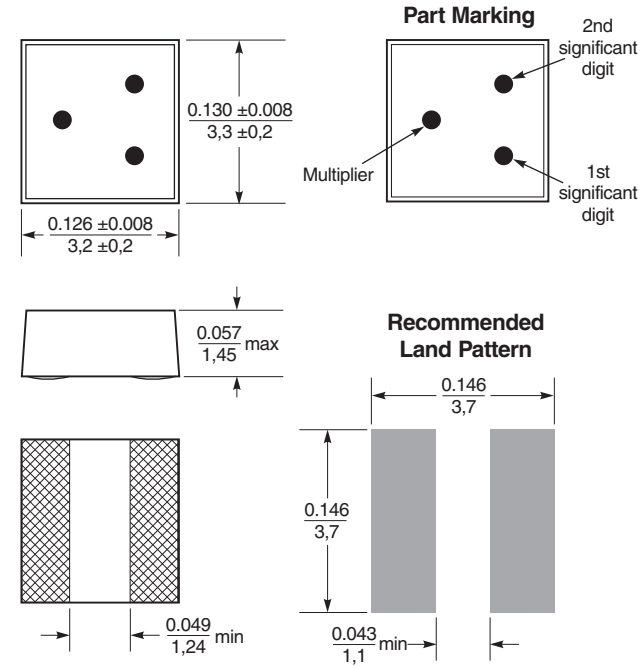
Shielded Power Inductors – EPL3314 Series

Typical L vs Frequency



Typical L vs Current





Dimensions are in inches / 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
EPL3314-102	1.0 µH	Brown	Black	Red
EPL3314-222	2.2 µH	Red	Red	Red
EPL3314-332	3.3 µH	Orange	Orange	Red
EPL3314-472	4.7 µH	Yellow	Violet	Red
EPL3314-822	8.2µH	Gray	Red	Red
EPL3314-103	10 µH	Brown	Black	Orange
EPL3314-153	15 µH	Brown	Green	Orange
EPL3314-473	47 µH	Yellow	Violet	Orange

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

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