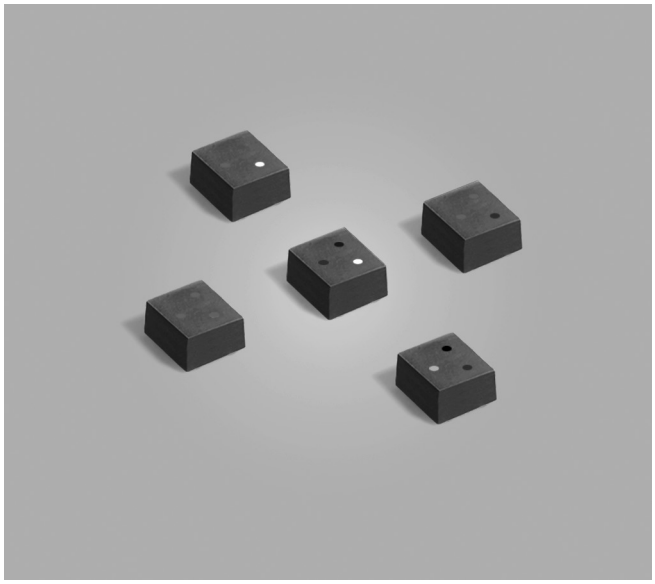
Shielded Power Inductors – EPL3012



- Low profile shielded power inductors; 3 × 3 × 1.3 mm max.
- Very low DCR, high SRF ratings, Isat ratings up to 2.0 A

Designer's Kit C437 contains 5 each of all values
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 38 – 42 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, 0.2 mm thick, 4 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
EPL3012-102ML_	1.0	0.060	0.066	110	0.85	1.4	2.0	1.7	2.2
EPL3012-152ML_	1.5	0.069	0.075	103	0.70	1.2	1.7	1.5	1.9
EPL3012-182ML_	1.8	0.076	0.084	92	0.65	1.1	1.6	1.4	1.8
EPL3012-222ML_	2.2	0.097	0.106	76	0.55	0.95	1.4	1.3	1.7
EPL3012-332ML_	3.3	0.136	0.150	62	0.50	0.90	1.1	1.1	1.4
EPL3012-472ML_	4.7	0.165	0.181	52	0.47	0.85	1.0	0.90	1.1
EPL3012-103ML_	10	0.316	0.348	32	0.34	0.59	0.80	0.60	0.79
EPL3012-223ML_	22	0.718	0.790	18	0.17	0.38	0.61	0.42	0.54

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

EPL3012-223MLC

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.

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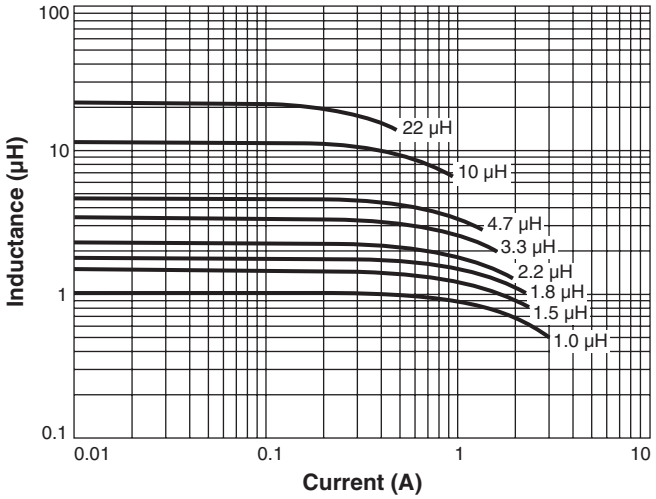
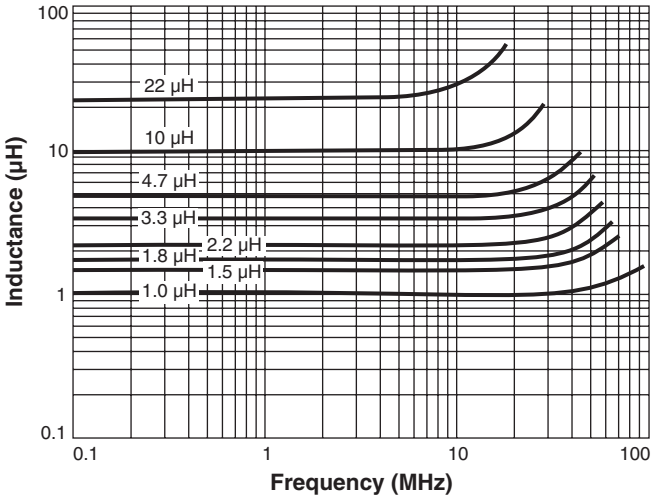
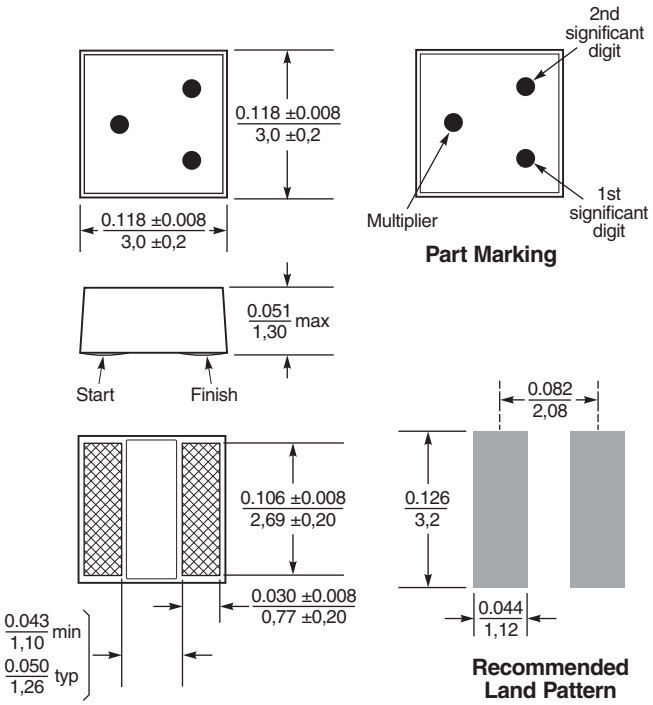
Shielded Power Inductors – EPL3012 Series

L vs Current



L vs Frequency





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

Dimensions are in inches / mm

Part Marking

Part number	Value	1st digit	2nd digit	Multiplier
EPL3012-102	1.0 µH	Brown	Black	Red
EPL3012-152	1.5 µH	Brown	Green	Red
EPL3012-182	1.8 µH	Brown	Gray	Red
EPL3012-222	2.2 µH	Red	Red	Red
EPL3012-332	3.3 µH	Orange	Orange	Red
EPL3012-472	4.7 µH	Yellow	Violet	Red
EPL3012-103	10 µH	Brown	Black	Orange
EPL3012-223	22 µH	Red	Red	Orange

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

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