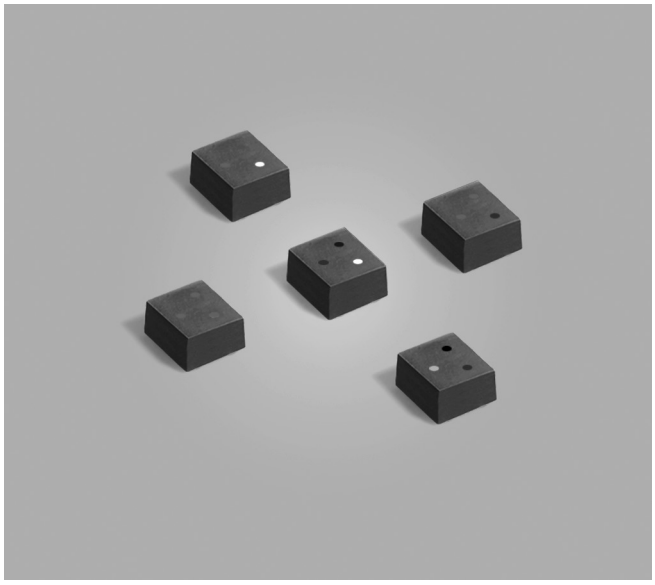
Shielded Power Inductors – FPL3012



- 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
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).
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.

Part number	Inductance ±20% (µH)	DCR (Ohms) nom	DCR (Ohms) max	SRF typ (MHz)	Isat (A) 10% drop	Isat (A) 20% drop	Isat (A) 30% drop	Irms (A) 20°C rise	Irms (A) 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:

FPL3012-223MLC

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 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.
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.
7. Electrical specifications at 25°C.

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

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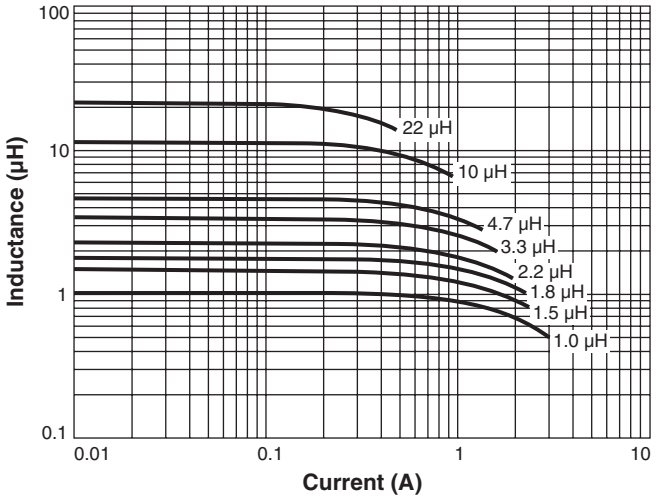
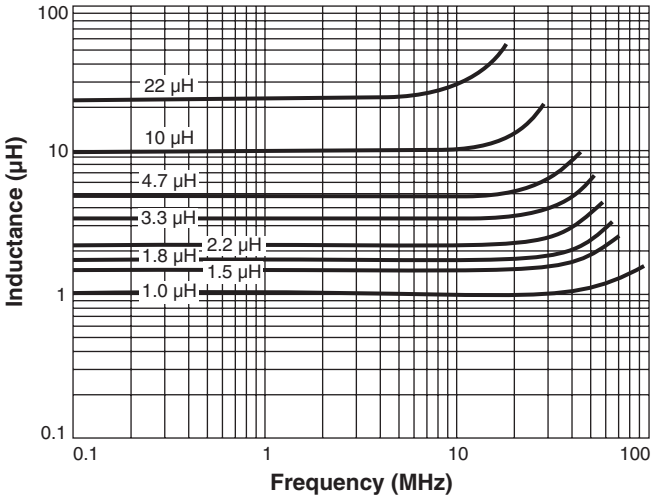
This product may not be used in medical or high risk applications without prior PulseGM approval.
Specification subject to change without notice.
Please check web site for latestinformation.

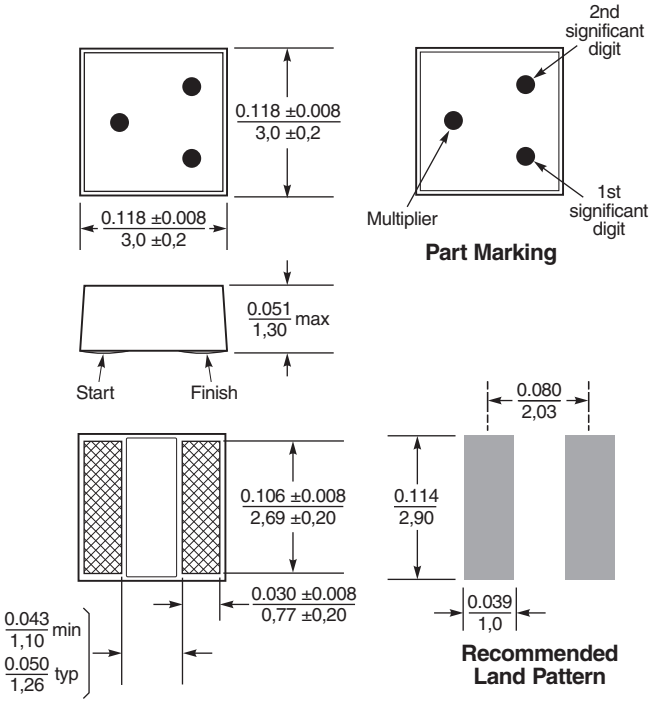
Shielded Power Inductors – FPL3012 Series

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

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.

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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Specification subject to change without notice.
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