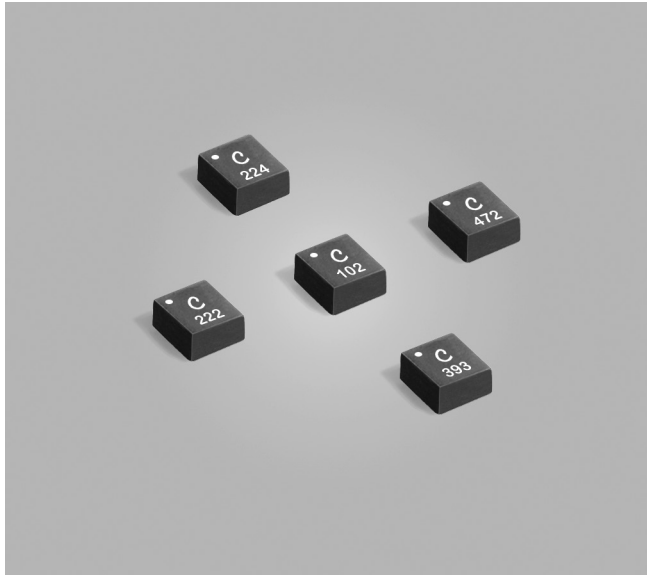


# Shielded Power Inductor – XFL3012



- High current, magnetically shielded power inductors
- 3 mm × 3 mm footprint; 1.3 mm maximum height
- AEC-Q200 Grade 3 qualified (–40°C to +85°C ambient)

**Designer's Kit C440** contains 5 of each XFL3012 and XFL3010 value  
**Core material** Composite

**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 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: –55°C to +125°C.

Tape and reel packaging: –55°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, 0.23 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 <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
XFL3012-331ME_	0.33	0.023	0.027	293	2.3	3.0	3.4	2.6	3.5
XFL3012-561ME_	0.56	0.028	0.032	203	1.8	2.5	2.9	2.2	3.0
XFL3012-681ME_	0.68	0.034	0.040	164	1.6	2.2	2.7	2.1	2.8
XFL3012-102ME_	1.0	0.039	0.046	115	1.4	1.9	2.3	1.9	2.6
XFL3012-152ME_	1.5	0.060	0.072	94.4	1.3	1.8	2.2	1.6	2.2
XFL3012-222ME_	2.2	0.081	0.097	73.2	1.0	1.3	1.6	1.4	1.9
XFL3012-332ME_	3.3	0.106	0.127	61.6	0.87	1.2	1.4	1.2	1.6
XFL3012-472ME_	4.7	0.143	0.171	52.6	0.72	1.0	1.2	1.0	1.4
XFL3012-682ME_	6.8	0.166	0.200	39.9	0.61	0.84	0.97	0.94	1.3
XFL3012-103ME_	10	0.255	0.306	34.6	0.50	0.65	0.74	0.90	1.2
XFL3012-153ME_	15	0.394	0.483	25.8	0.43	0.58	0.65	0.74	1.0
XFL3012-223ME_	22	0.608	0.630	22.2	0.32	0.45	0.52	0.58	0.80
XFL3012-333ME_	33	0.855	0.896	16.6	0.23	0.32	0.38	0.42	0.57
XFL3012-393ME_	39	0.919	0.985	15.9	0.23	0.32	0.37	0.39	0.54
XFL3012-473ME_	47	1.220	1.32	13.7	0.21	0.28	0.32	0.33	0.46
XFL3012-563ME_	56	1.430	1.52	12.1	0.19	0.26	0.30	0.32	0.44
XFL3012-683ME_	68	2.16	2.37	10.9	0.16	0.21	0.25	0.31	0.42
XFL3012-823ME_	82	2.30	2.44	10.8	0.15	0.21	0.24	0.26	0.34
XFL3012-104ME_	100	2.63	3.00	9.4	0.17	0.24	0.28	0.29	0.39
XFL3012-224ME_	220	6.83	8.00	6.1	0.09	0.14	0.16	0.17	0.23

1. When ordering, please specify **termination** and **packaging** codes:

XFL3012-224ME**C**

**Termination:** E = RoHS compliant tin-silver-copper (96.5/3/0.5) over tin over nickel over silver-platinum.

Special order:

S = non-RoHS tin-lead (63/37).

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

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 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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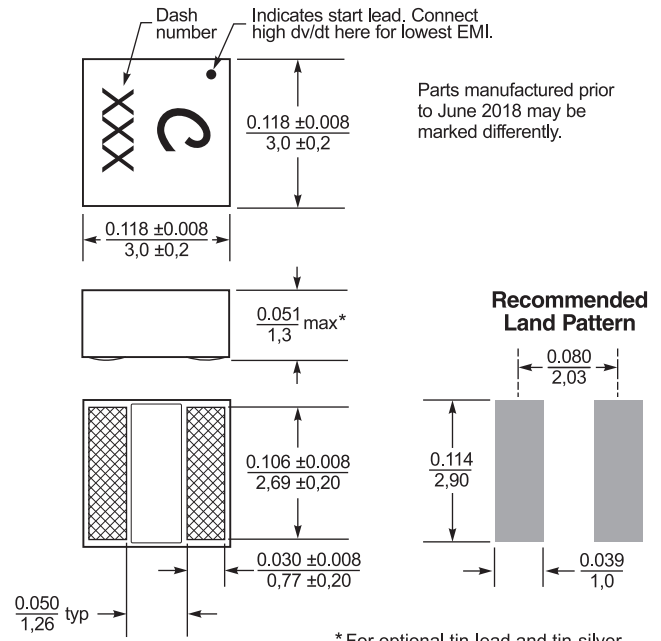
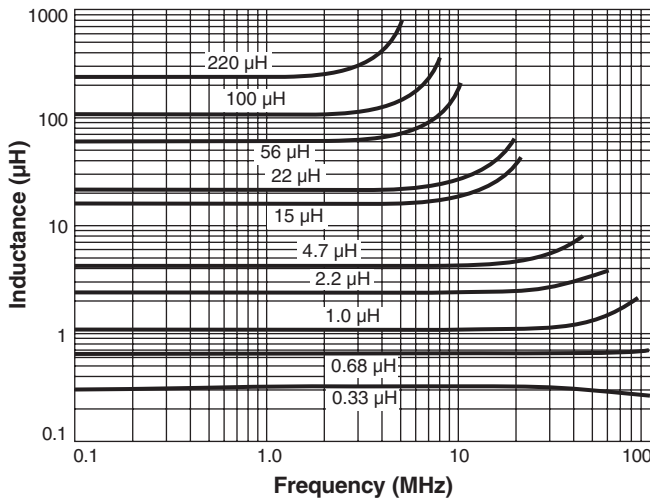
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# Shielded Power Inductor – XFL3012

## Typical L vs Frequency



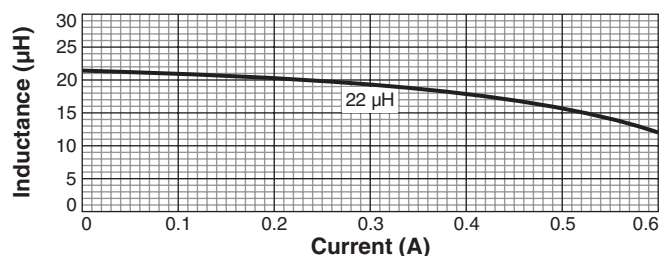
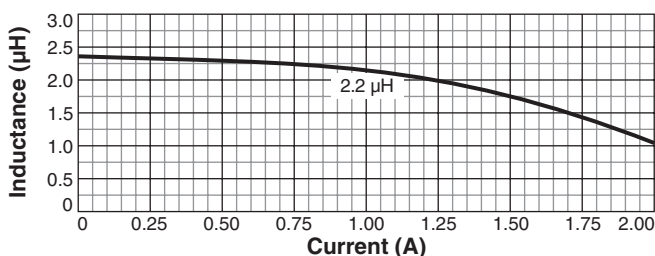
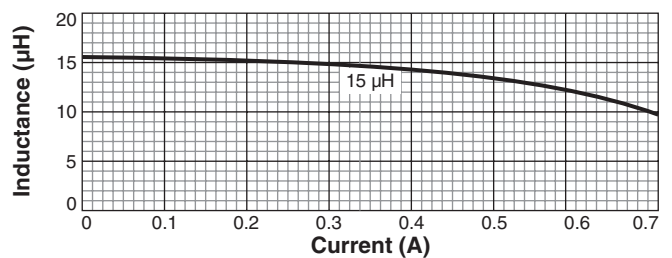
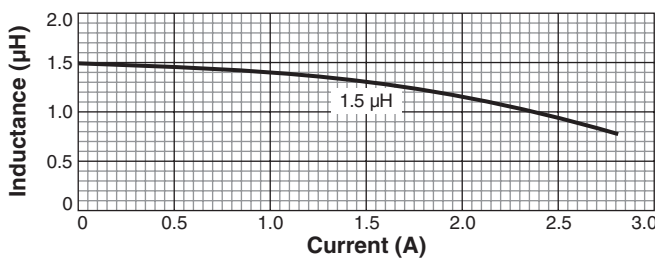
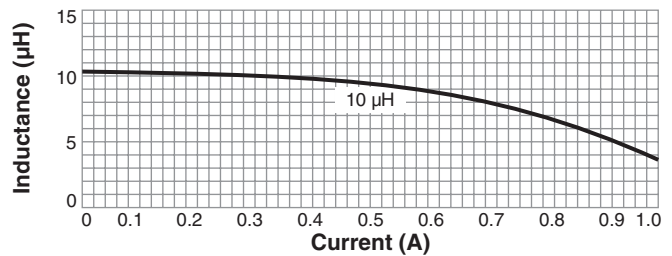
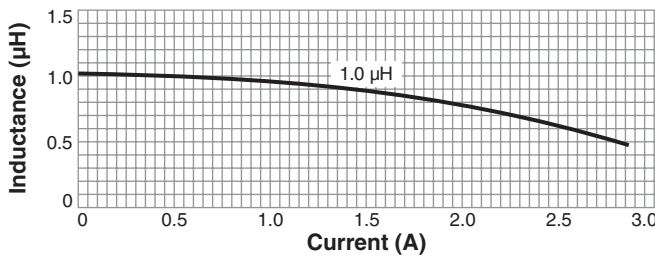
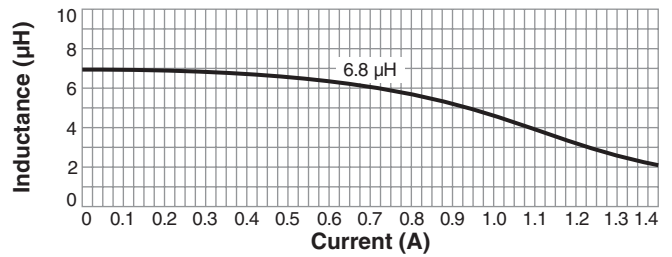
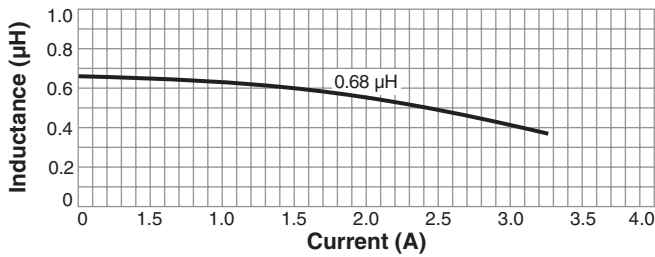
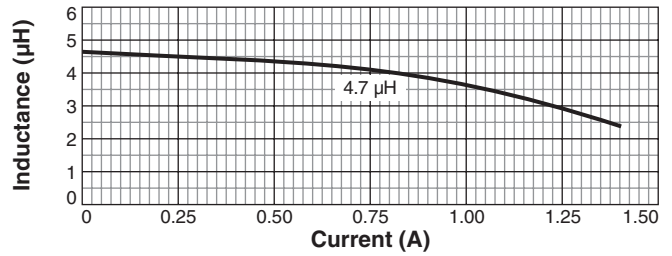
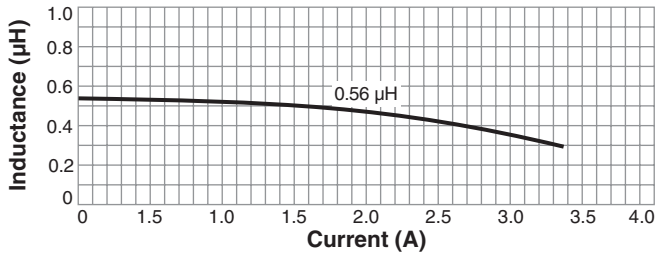
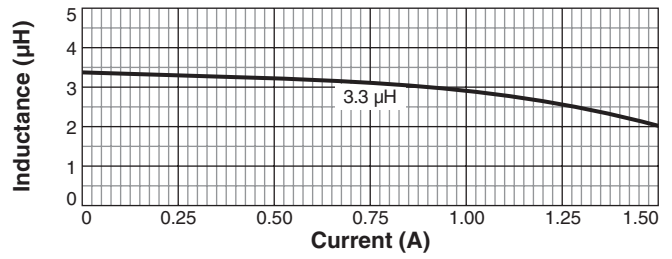
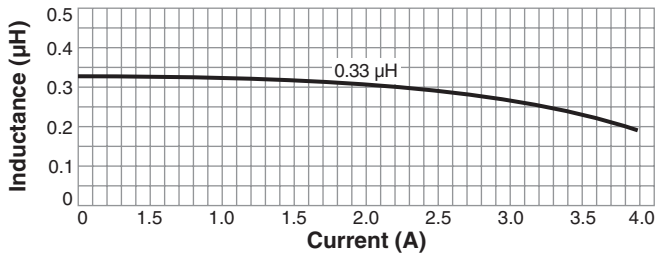
Dimensions are in  $\frac{\text{inches}}{\text{mm}}$

\* 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.



# Shielded Power Inductor – XFL3012

## L vs Current



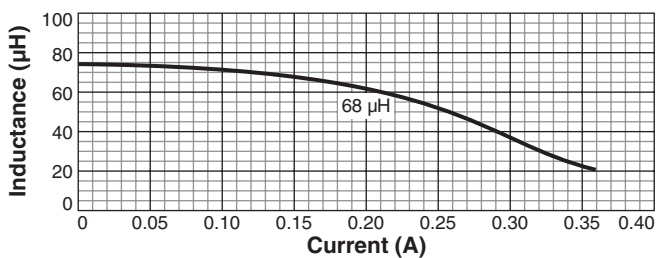
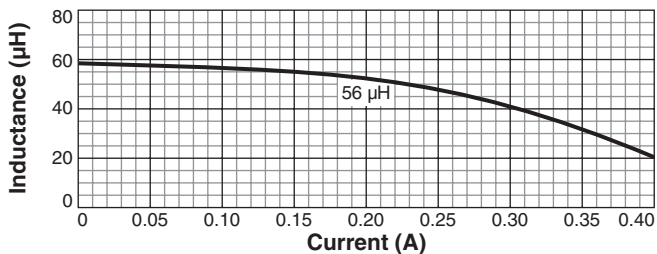
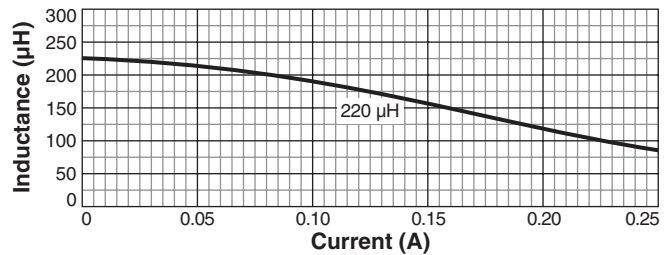
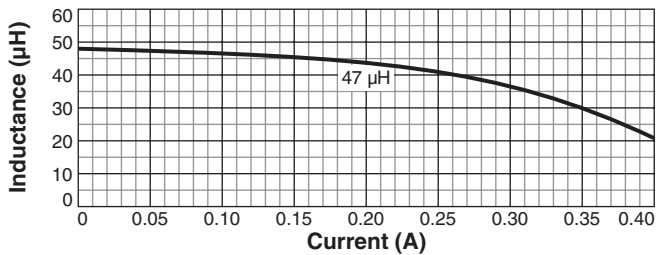
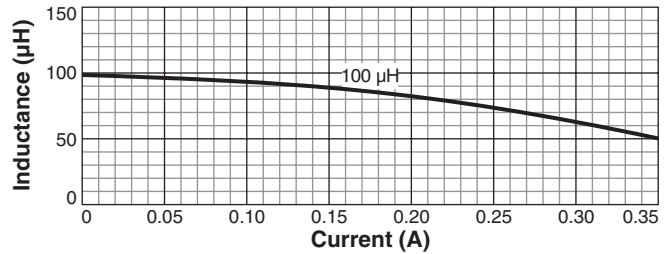
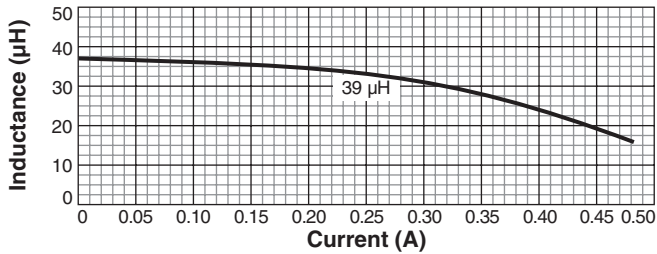
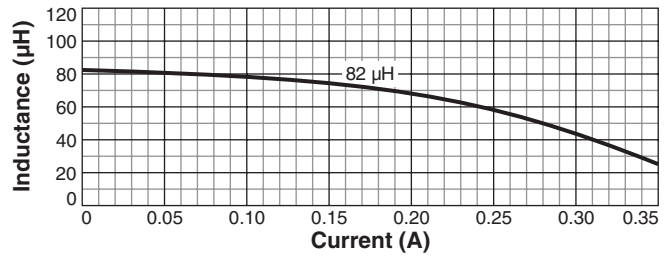
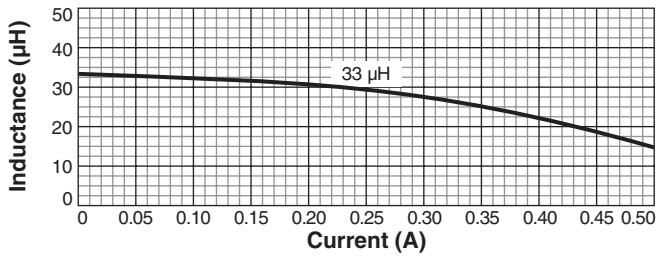
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# Shielded Power Inductor – XFL3012

## L vs Current



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