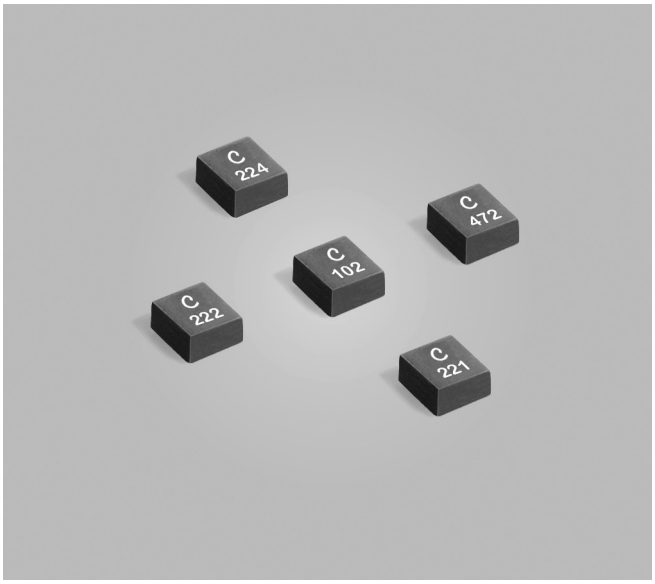
Shielded Power Inductor – XFL3012



- High current, magnetically shielded power inductors
- 3 mm × 3 mm footprint; 1.2 mm maximum height

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 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, 0.23 mm thick, 4 mm pocket spacing, 1.25 mm pocket depth

PCB washing Tested with pure water or alcohol only. For other solvents, 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
XFL3012-221ME_	0.22	0.014	0.019	340	2.5	3.5	4.1	2.6	3.5
XFL3012-361ME_	0.36	0.019	0.023	210	2.3	3.1	3.5	2.2	3.0
XFL3012-601ME_	0.60	0.023	0.029	167	1.9	2.6	3.0	2.1	2.8
XFL3012-102ME_	1.0	0.035	0.042	115	1.6	2.2	2.5	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 **packaging** code:

XFL3012-472MEC

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 or equivalent.
5. DC current at which the inductance drops the specified amount 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.

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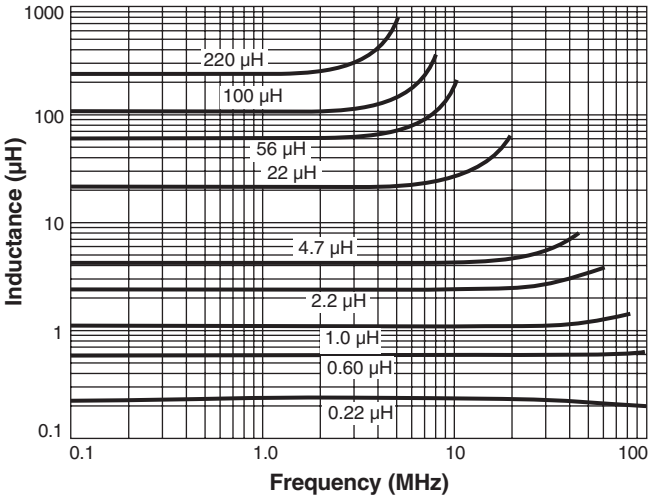
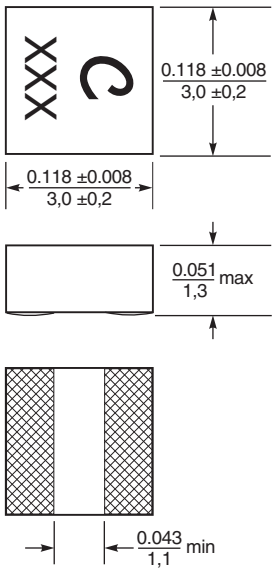
Shielded Power Inductor – XFL3012

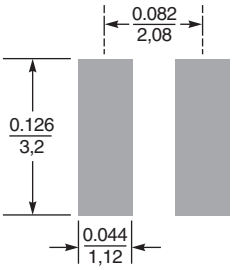
Typical L vs Frequency





Parts manufactured prior to January 2011 may not have part marking.

Recommended Land Pattern



Dimensions are in inches / mm

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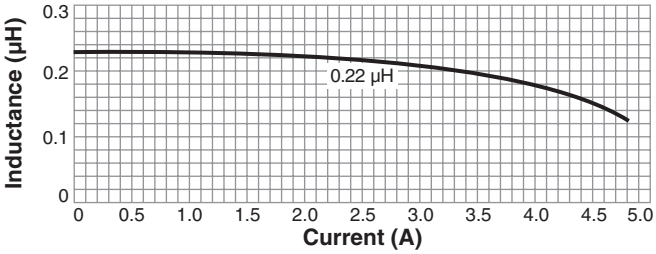
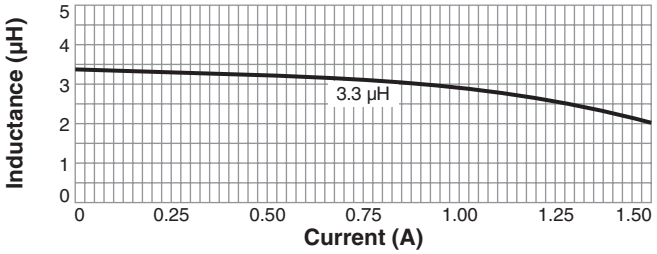
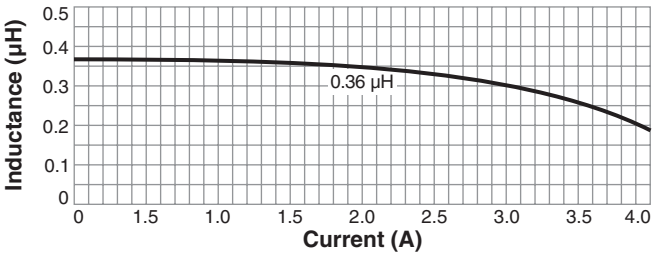
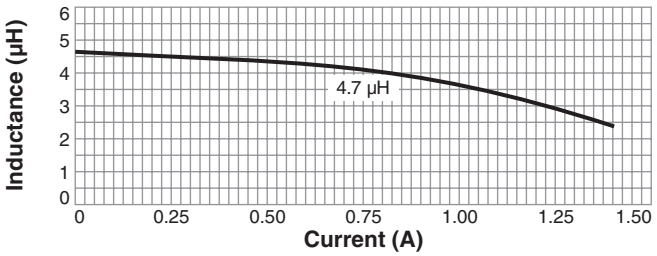
Shielded Power Inductor – XFL3012

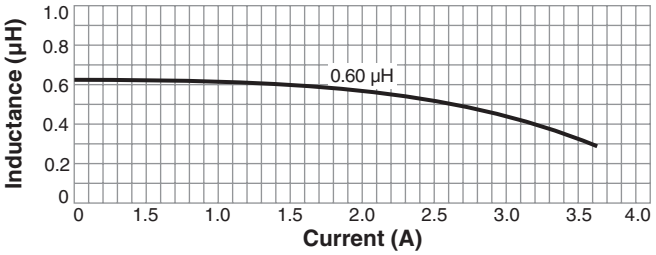
L vs Current

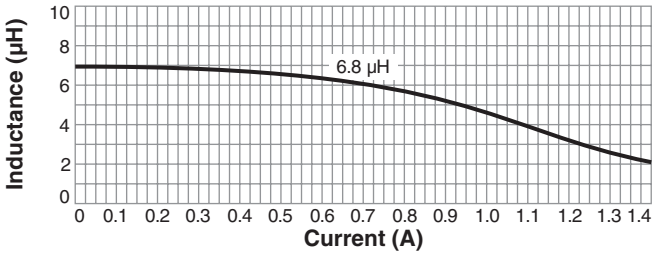


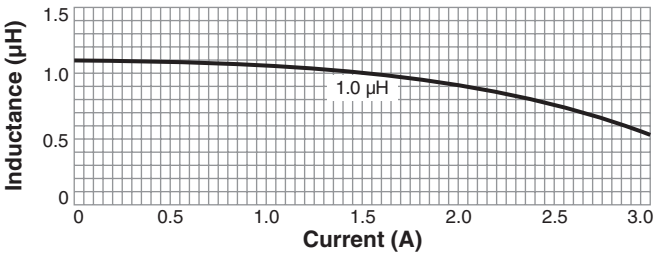


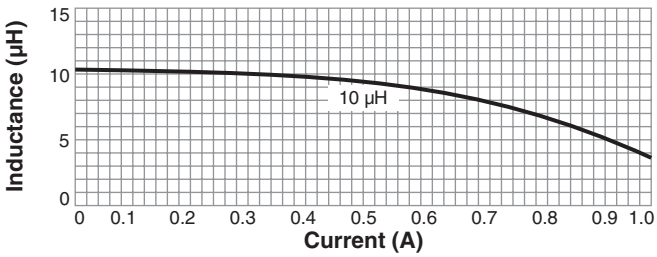


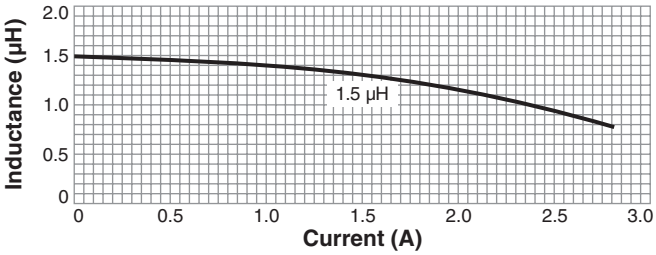


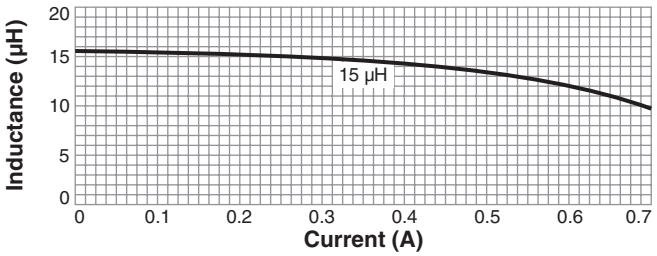


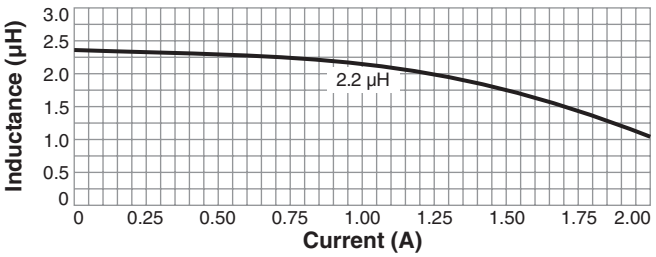


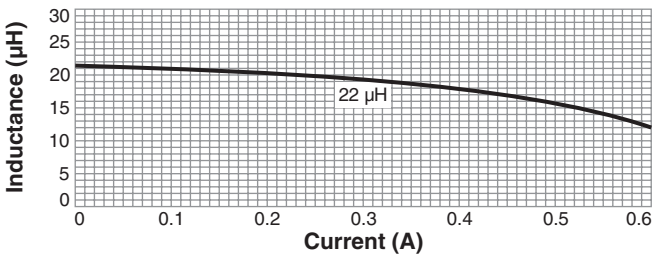












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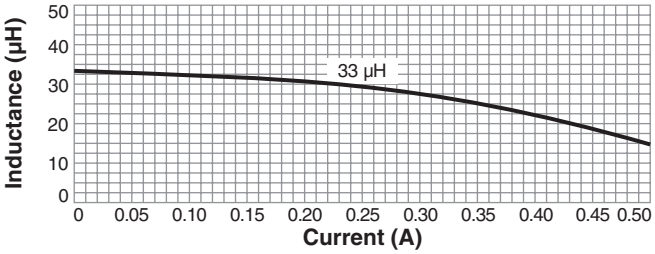
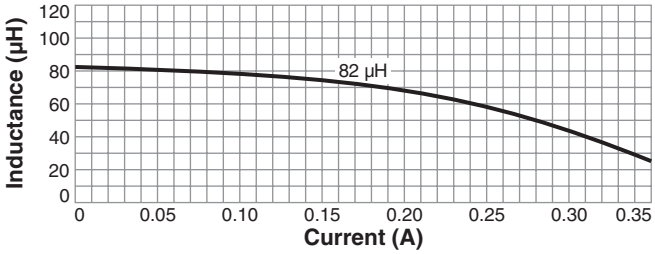
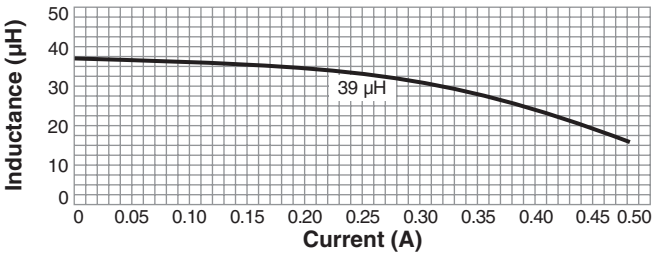
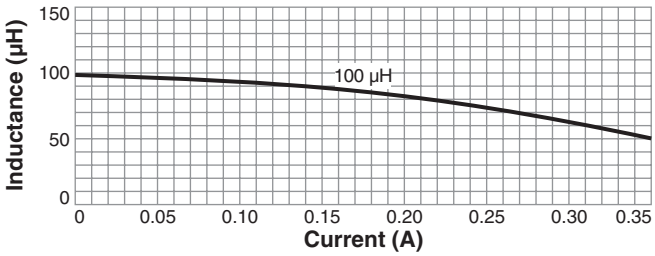
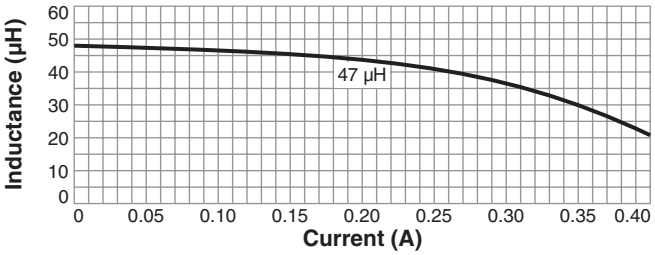
L vs Current

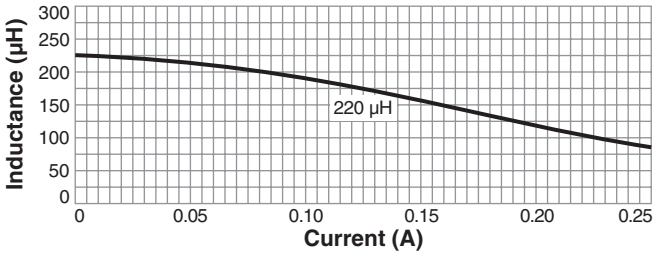


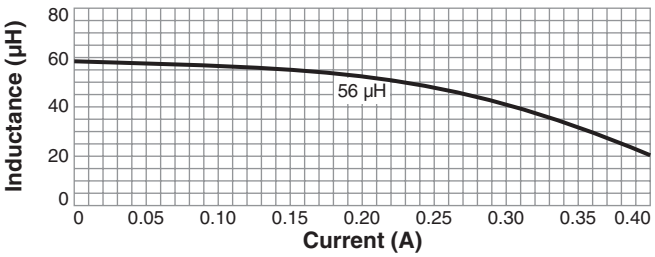


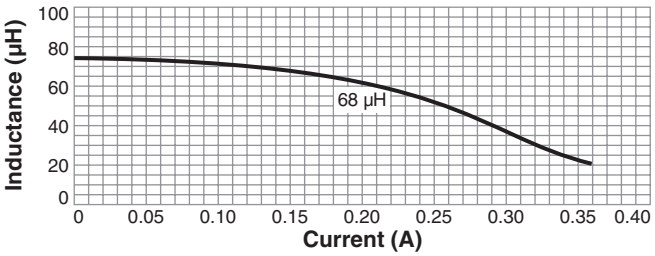




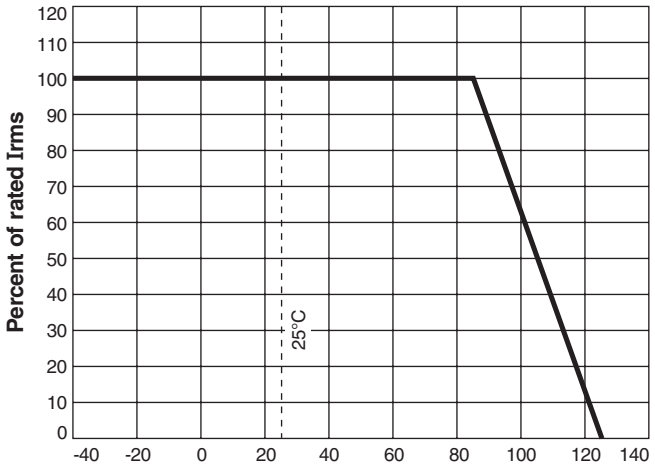








Typical Irms Derating



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