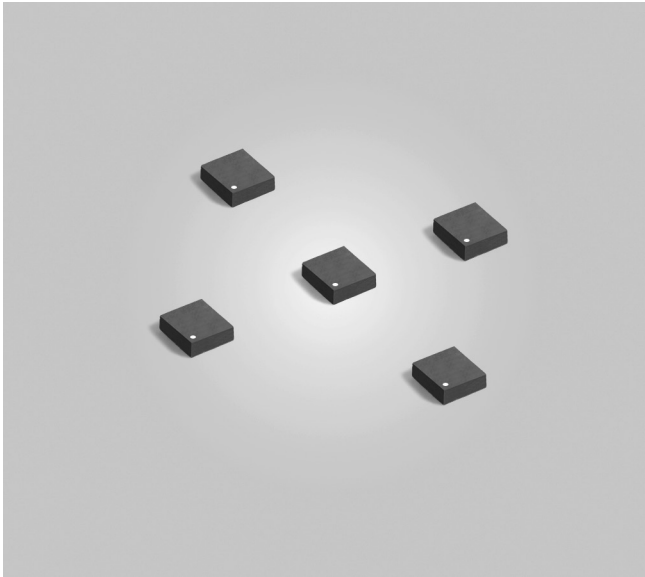




# Shielded Power Inductors – XFL2006



- Lowest profile, ultra-miniature, shielded power inductor
- Soft saturation makes them ideal for VRM/VRD applications.

**Designer's Kit C434** contains 5 of each value and 5 of each XFL2005

**Core material** Composite

**Core and winding loss** See [www.coilcraft.com/coreloss](http://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.

**Weight** 12 – 13 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, 0.28 mm thick, 4 mm pocket spacing, 0.76 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
XFL2006-102ME_	1.0	0.153	0.169	170	0.71	1.0	1.2	0.910	1.22
XFL2006-222ME_	2.2	0.278	0.306	110	0.49	0.69	0.78	0.710	0.950
XFL2006-332ME_	3.3	0.460	0.506	88	0.42	0.56	0.66	0.550	0.720
XFL2006-472ME_	4.7	0.665	0.732	68	0.31	0.44	0.52	0.500	0.660
XFL2006-562ME_	5.6	0.75	0.825	61	0.30	0.43	0.50	0.460	0.600
XFL2006-682ME_	6.8	0.92	1.02	57	0.26	0.35	0.41	0.400	0.520
XFL2006-822ME_	8.2	1.08	1.19	51	0.24	0.33	0.39	0.370	0.490
XFL2006-103ME_	10.0	1.27	1.40	45	0.24	0.31	0.37	0.345	0.440
XFL2006-153ME_	15.0	2.02	2.22	37	0.19	0.25	0.29	0.265	0.350
XFL2006-223ME_	22.0	2.78	3.06	30.5	0.150	0.205	0.240	0.235	0.305
XFL2006-333ME_	33.0	4.45	4.90	24.0	0.110	0.150	0.180	0.160	0.205
XFL2006-473ME_	47.0	5.60	6.16	19.5	0.090	0.130	0.155	0.155	0.205
XFL2006-563ME_	56.0	6.65	7.32	16.5	0.085	0.120	0.145	0.145	0.195
XFL2006-683ME_	68.0	8.50	9.35	16.0	0.080	0.115	0.135	0.115	0.155
XFL2006-823ME_	82.0	9.25	10.18	13.5	0.065	0.090	0.115	0.125	0.165
XFL2006-104ME_	100.0	11.10	12.25	13.0	0.065	0.090	0.115	0.100	0.135

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

XFL2006-823MEC

**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).

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 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.



[www.coilcraft.com](http://www.coilcraft.com)

**US** +1-847-639-6400 [sales@coilcraft.com](mailto:sales@coilcraft.com)

**UK** +44-1236-730595 [sales@coilcraft-europe.com](mailto:sales@coilcraft-europe.com)

**Taiwan** +886-2-2264 3646 [sales@coilcraft.com.tw](mailto:sales@coilcraft.com.tw)

**China** +86-21-6218 8074 [sales@coilcraft.com.cn](mailto:sales@coilcraft.com.cn)

**Singapore** + 65-6484 8412 [sales@coilcraft.com.sg](mailto:sales@coilcraft.com.sg)

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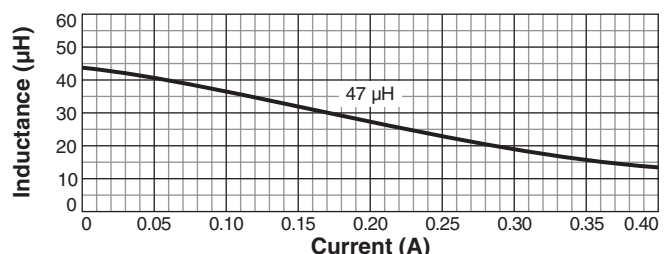
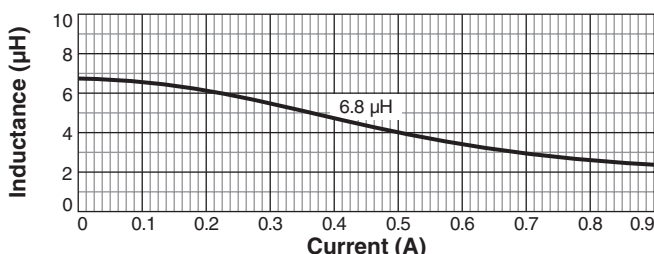
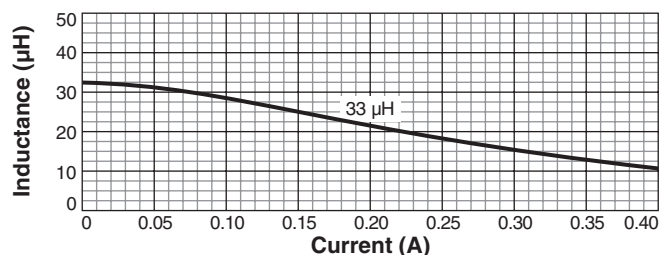
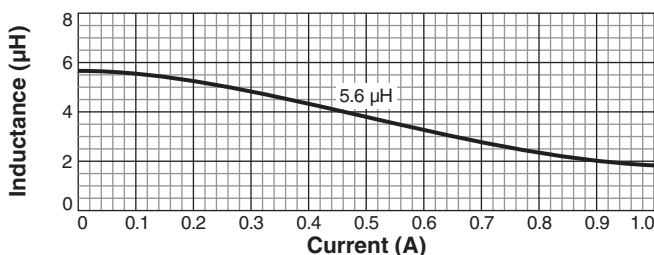
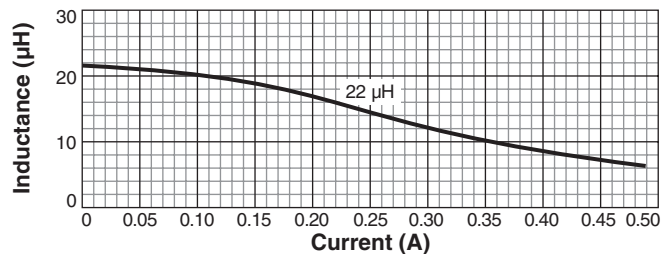
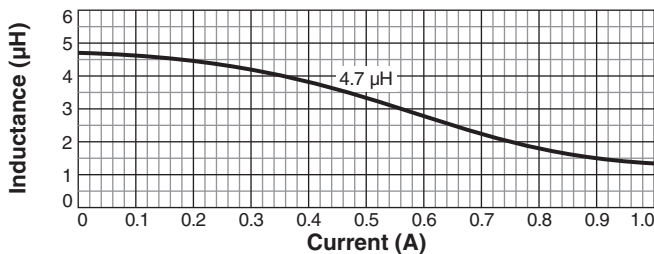
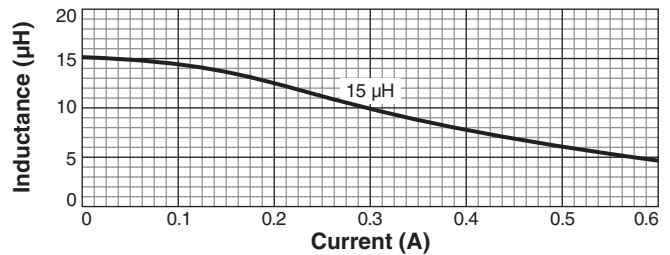
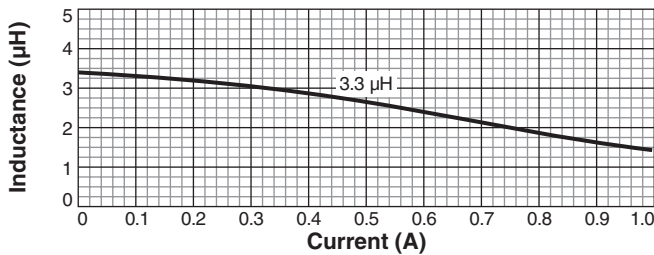
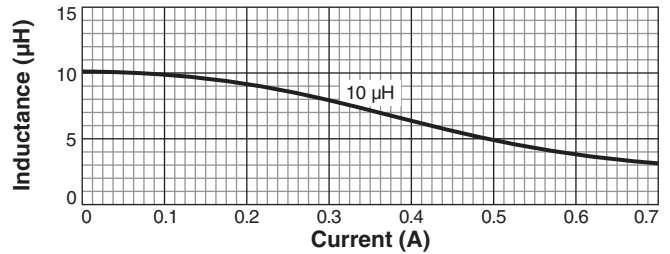
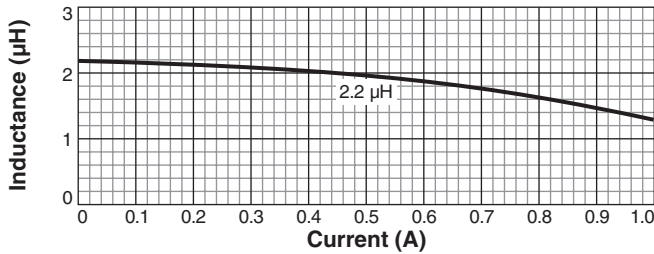
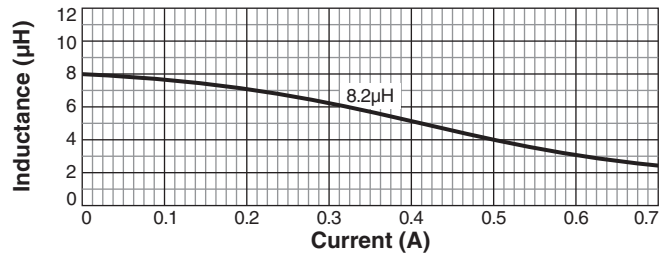
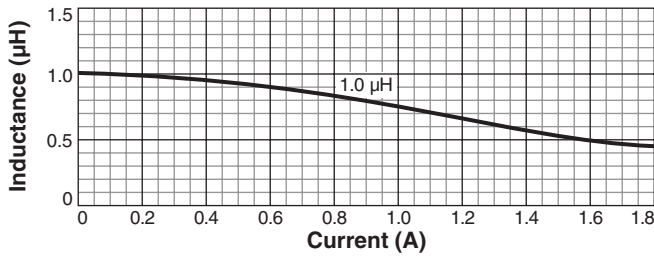
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# XFL2006 Shielded Power Inductor Series

## L vs Current



**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

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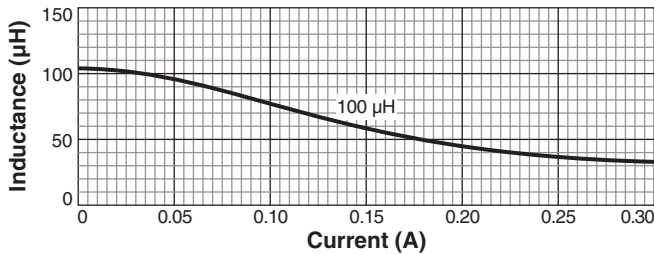
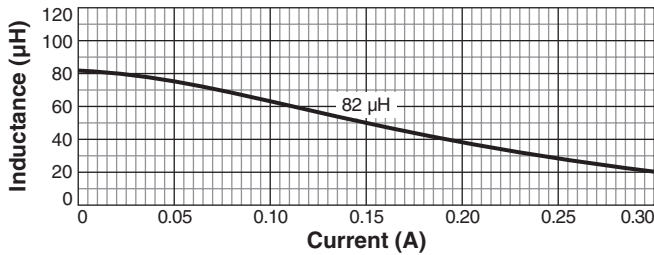
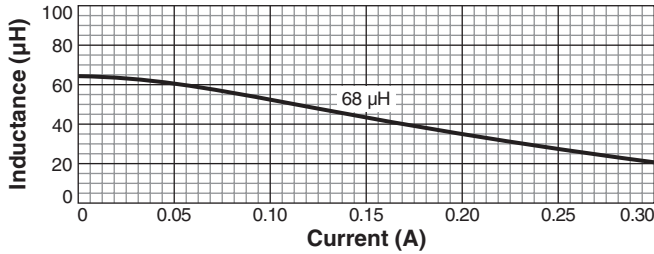
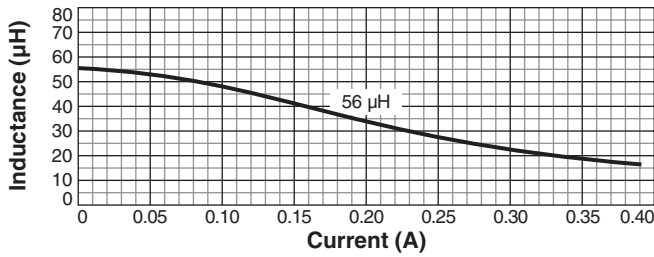
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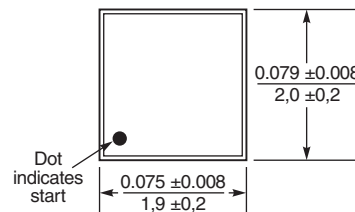
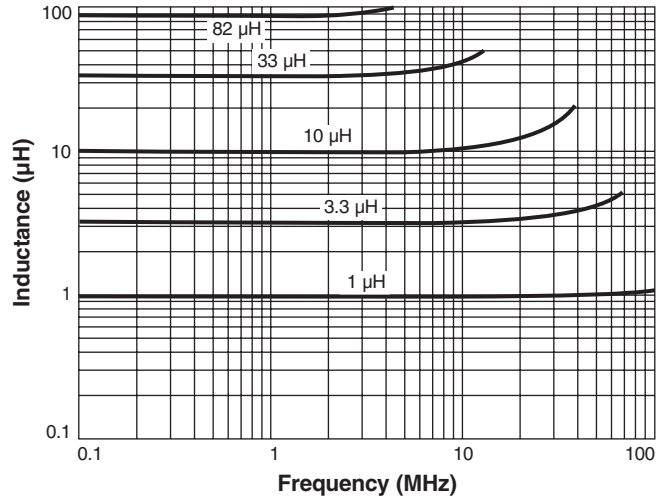


# XFL2006 Shielded Power Inductor Series

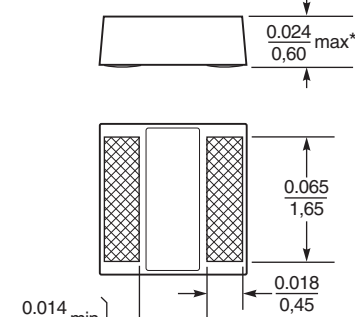
## L vs Current



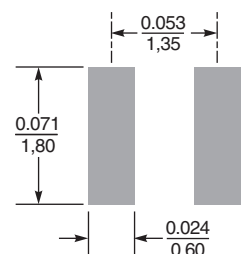
## Typical L vs Frequency



Note: Earlier production parts may not be marked with a dot.



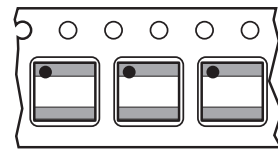
### Recommended Land Pattern



0.014 min  
0.35  
0.035 typ  
0.90  
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.

## Tape and reel orientation



US +1-847-639-6400 sales@coilcraft.com  
 UK +44-1236-730595 sales@coilcraft-europe.com  
 Taiwan +886-2-2264 3646 sales@coilcraft.com.tw  
 China +86-21-6218 8074 sales@coilcraft.com.cn  
 Singapore + 65-6484 8412 sales@coilcraft.com.sg

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