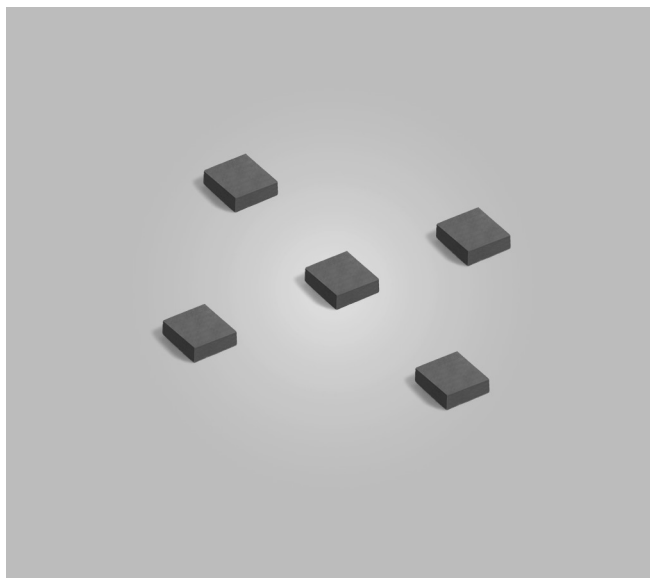




# Shielded Power Inductors – XFL2005



- Lowest profile, ultra-miniature, magnetically shielded power inductor; only 0.5 mm high, 2 mm × 2 mm footprint
- Soft saturation

**Designer's Kit C434** contains 5 of each value and 5 of each XFL2006

**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.

**Weight** 8.4 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, 0.28 mm thick, 4 mm pocket spacing, 0.76 mm pocket depth

**PCB washing** Tested with pure water or alcohol only. For other solvents, 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
XFL2005-151ME_	0.15	0.085	0.098	590	1.05	1.55	1.90	1.25	1.60
XFL2005-221ME_	0.22	0.111	0.128	480	0.72	1.20	1.50	1.13	1.48
XFL2005-331ME_	0.33	0.144	0.166	380	0.65	1.05	1.30	1.00	1.30
XFL2005-471ME_	0.47	0.177	0.204	275	0.60	0.97	1.20	0.95	1.25
XFL2005-681ME_	0.68	0.215	0.247	220	0.50	0.75	0.95	0.80	1.05

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

**XFL2005-471MEC**

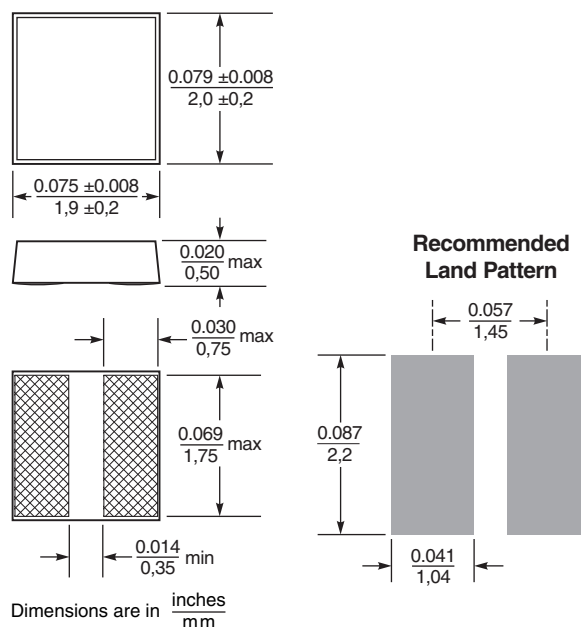
**Packaging: C** = 7" machine-ready reel. EIA-481 embossed plastic tape 2000 parts per full reel).

**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).

- Inductance tested at 100 kHz, 0.1 Vrms, 0 A DC.
- DCR measured on a micro-ohmmeter.
- SRF measured using Agilent/HP 4395A or equivalent.
- DC current at which the inductance drops the specified amount from its value without current.
- Current that causes the specified temperature rise from 25°C ambient.
- Electrical specifications at 25°C.

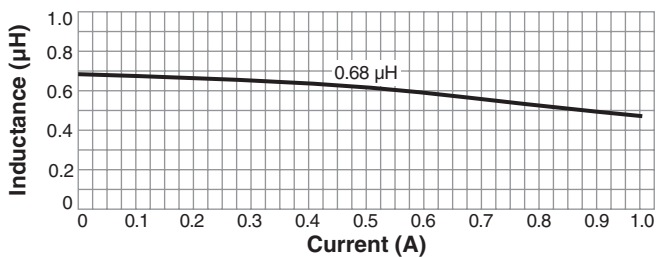
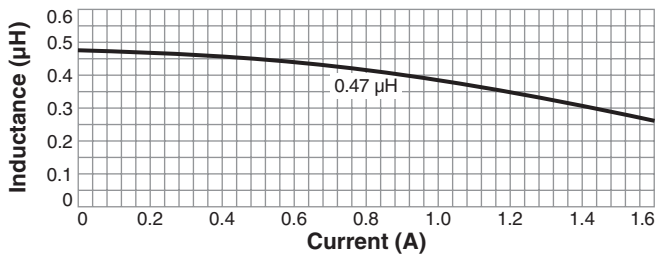
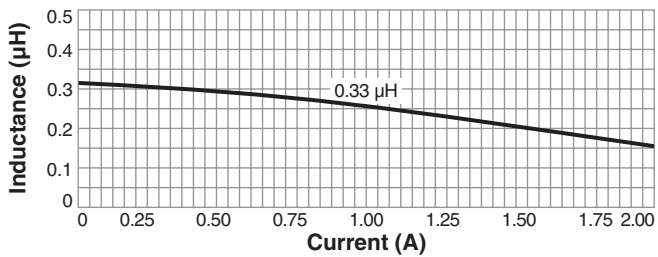
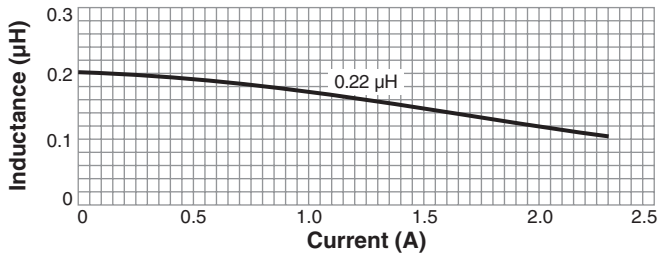
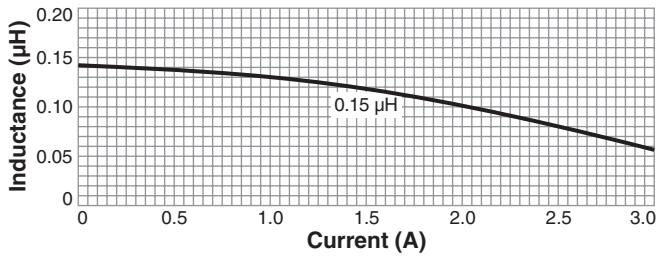
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



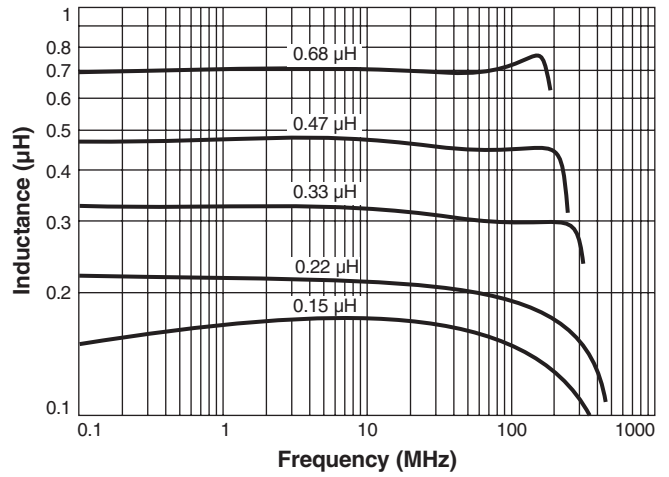


# Shielded Power Inductor – XFL2005

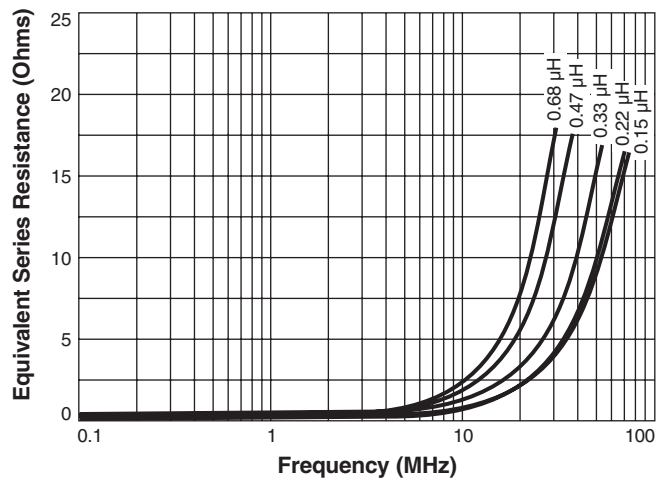
## L vs Current



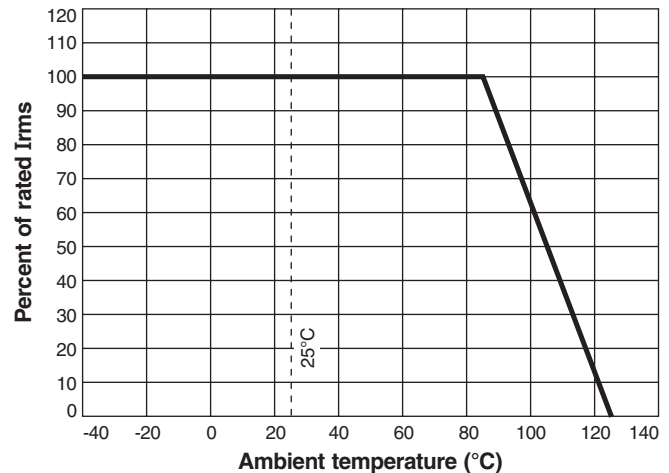
## L vs Frequency



## ESR vs Frequency



## Irms Derating



**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

Document 779-2 Revised 02/15/12  
 © Coilcraft Inc. 2013  
 This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.