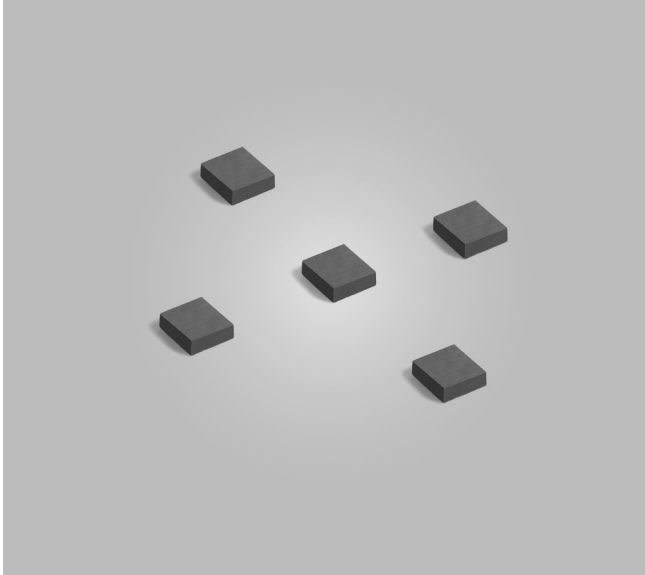


Shielded Power Inductors – XFL2005



- 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

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 8.4 mg

Ambient temperature -40°C to +855°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 ¹	Inductance ² ±20% (µH)	DCR (Ohms) ³		SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶	
		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 **termination** and **packaging** codes:

XFL2005-471MEC

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.

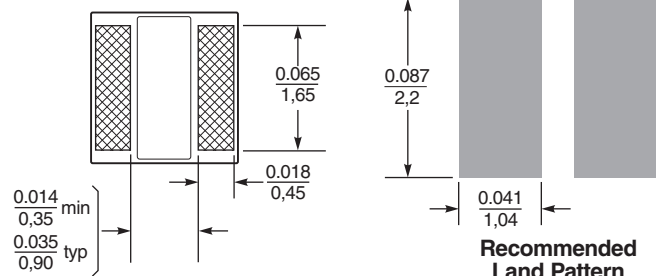
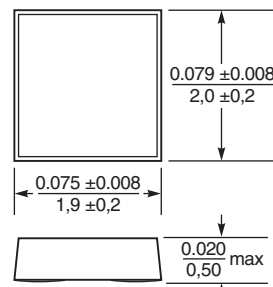
4. SRF measured using Agilent/HP 4395A or equivalent.

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.

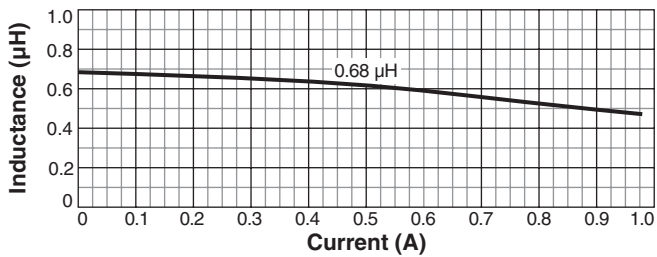
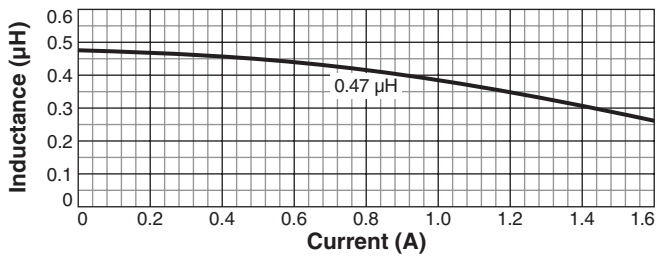
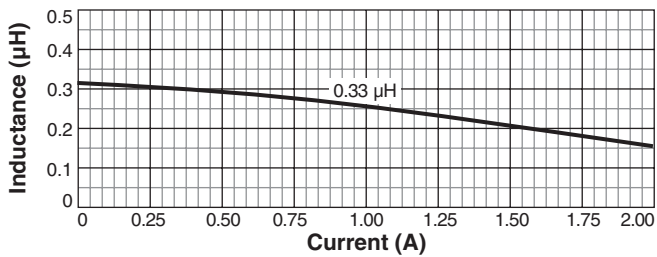
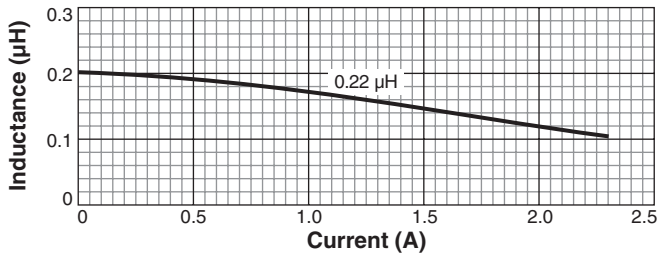
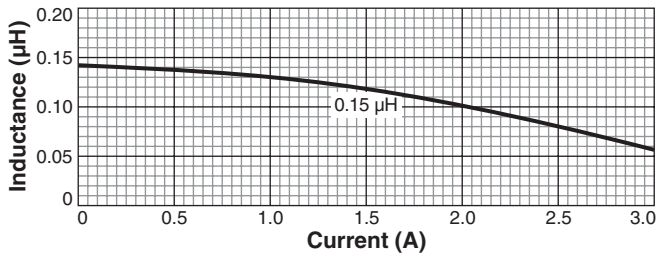


Dimensions are in $\frac{\text{inches}}{\text{mm}}$

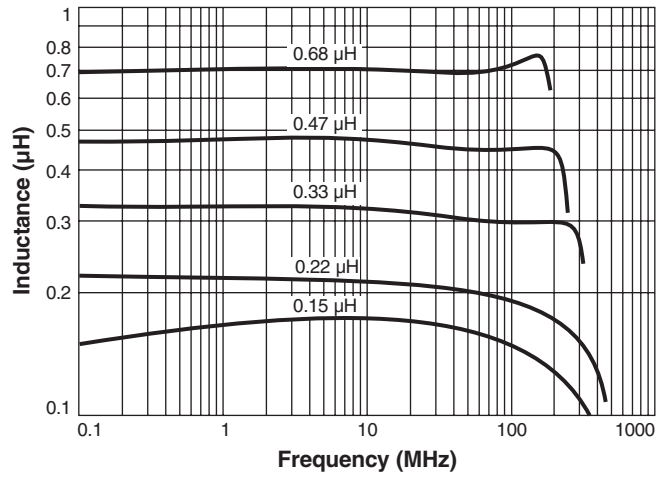


Shielded Power Inductor – XFL2005

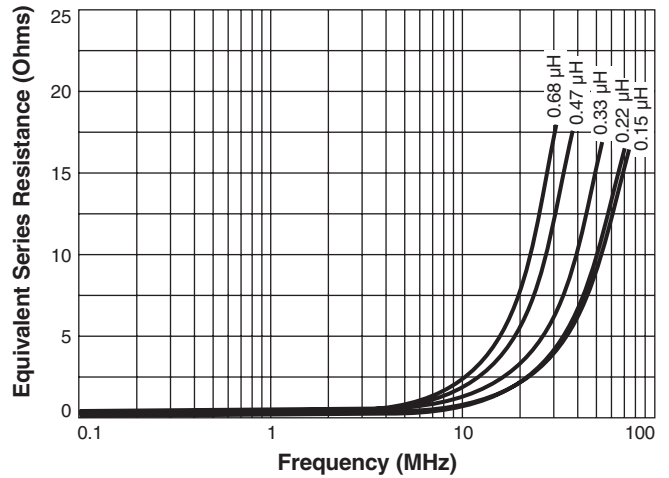
L vs Current



L vs Frequency



ESR vs Frequency



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