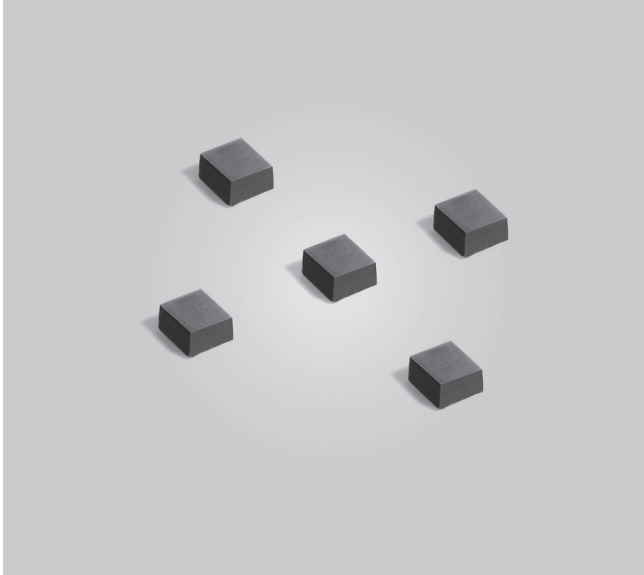




# Power Inductors – XPL2010 Series



- Ultra-miniature, magnetically shielded power inductors
- Very low DCR and excellent current handling.
- Soft saturation makes them ideal for VRM/VRD applications.

**Designer's Kit C428** contains 5 each of all values

**Core material** Composite

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

**Weight** 20 mg

**Terminations** RoHS compliant tin-silver-copper over tin over nickel over silver. Other terminations available at additional cost.

**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, 1.19 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (µH)	DCR nom <sup>3</sup> (Ohms)	DCR max <sup>3</sup> (Ohms)	SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
					10% drop	20% drop	30% drop	20°C rise	40°C rise
XPL2010-201ML_	0.20	0.024	0.027	408	2.80	3.45	3.75	2.2	2.8
XPL2010-331ML_	0.33	0.031	0.035	309	1.90	2.75	3.05	1.9	2.6
XPL2010-501ML_	0.50	0.040	0.045	218	1.80	2.35	2.64	1.7	2.3
XPL2010-681ML_	0.68	0.057	0.063	152	1.55	1.95	2.19	1.5	2.1
XPL2010-821ML_	0.82	0.068	0.075	132	1.25	1.65	1.90	1.3	1.7
XPL2010-102ML_	1.0	0.081	0.089	117	1.20	1.60	1.80	1.1	1.6
XPL2010-152ML_	1.5	0.105	0.116	80	0.950	1.30	1.50	1.0	1.4
XPL2010-222ML_	2.2	0.156	0.173	75	0.940	1.20	1.35	0.96	1.3
XPL2010-332ML_	3.3	0.207	0.228	55	0.700	0.925	1.05	0.79	1.1
XPL2010-472ML_	4.7	0.336	0.370	40	0.580	0.750	0.845	0.74	1.0
XPL2010-682ML_	6.8	0.421	0.463	33	0.450	0.620	0.725	0.64	0.87
XPL2010-822ML_	8.2	0.457	0.503	30	0.440	0.600	0.670	0.55	0.75
XPL2010-103ML_	10	0.555	0.611	28	0.390	0.525	0.610	0.49	0.66
XPL2010-104ML_	100	8.48	9.27	11	0.180	0.214	0.232	0.13	0.17
XPL2010-224ML_	220	19.2	21.1	7.1	0.122	0.143	0.161	0.086	0.116

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

**XPL2010-103MLC**

**Termination: E** = RoHS compliant tin-silver-copper over tin over nickel over silver.

**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 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.



[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)

Document 646-1 Revised 03/28/11

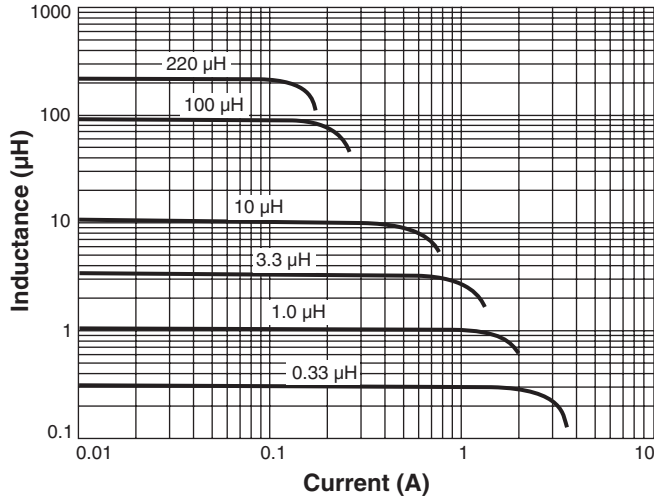
© Coilcraft Inc. 2011

This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

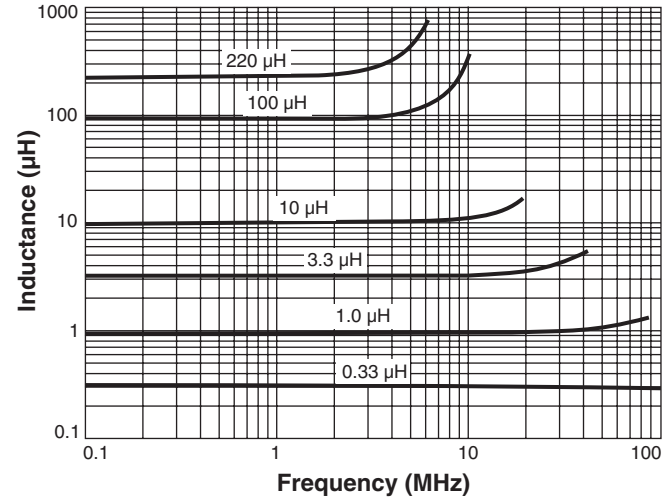


# SMT Power Inductors – XPL2010 Series

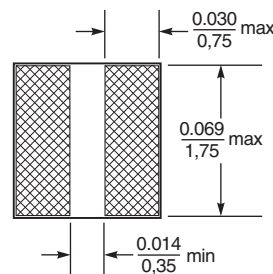
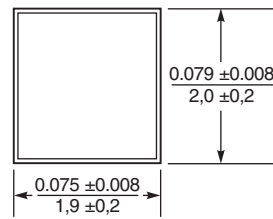
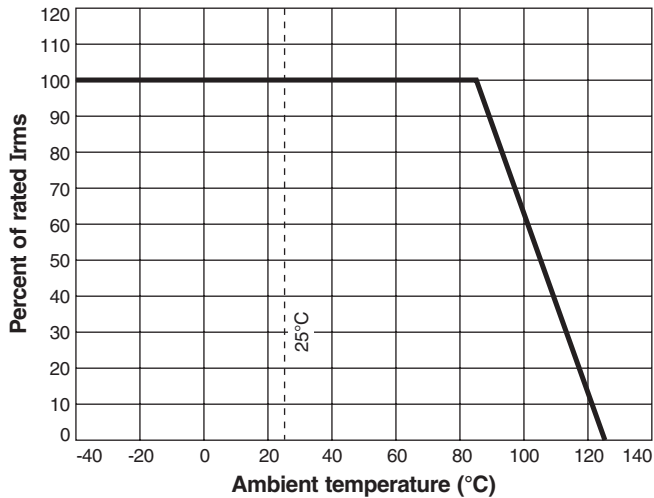
## Typical L vs Current



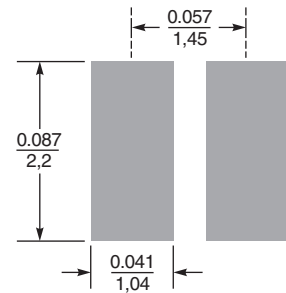
## Typical L vs Frequency



## Typical Irms Derating



### Recommended Land Pattern



Dimensions are in inches/mm



**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 646-2 Revised 03/28/11

© Coilcraft Inc. 2011  
 This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.