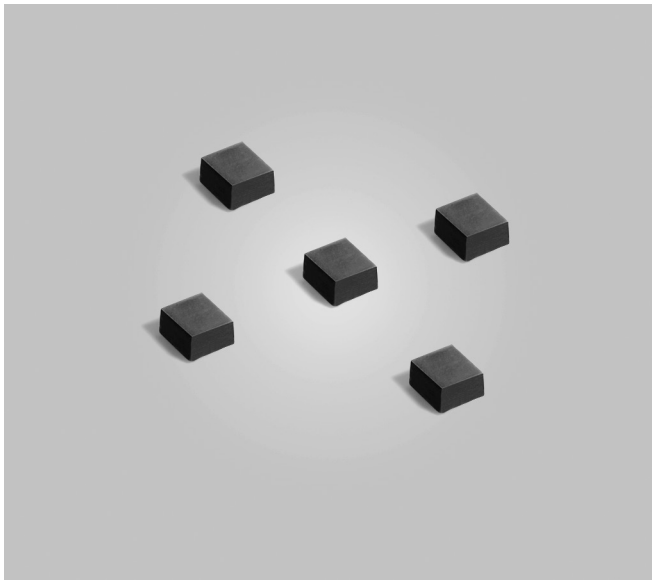
Power Inductors – XPL2010 Series



- Ultra-miniature, magnetically shielded power inductors
- AEC-200 Grade 1 qualified (–40°C to +125°C ambient)
- Very low DCR, excellent current handling, soft saturation

Designer's Kit C428 contains 5 each of all values
Core material Composite
Core and winding loss See www.coilcraft.com/coreloss
Weight 20 mg
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.
Ambient temperature –40°C to +125°C with Irms current, +125°C to +165°C with derated current
Storage temperature Component: –40°C to +165°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 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] 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
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
XPL2010-183ML_	18	1.47	1.60	31	0.500	0.560	0.590	0.32	0.43
XPL2010-223ML_	22	1.89	2.00	25	0.410	0.470	0.510	0.28	0.39
XPL2010-333ML_	33	2.59	2.85	20	0.330	0.380	0.410	0.23	0.31
XPL2010-473ML_	47	3.96	4.25	17	0.270	0.300	0.320	0.18	0.25
XPL2010-563ML_	56	4.48	4.82	15	0.240	0.280	0.300	0.17	0.24
XPL2010-683ML_	68	6.14	6.56	13	0.210	0.250	0.280	0.15	0.20
XPL2010-823ML_	82	6.45	6.90	12	0.200	0.240	0.260	0.15	0.20
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: L = RoHS compliant tin-silver-copper (96.5/3/0.5) 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.

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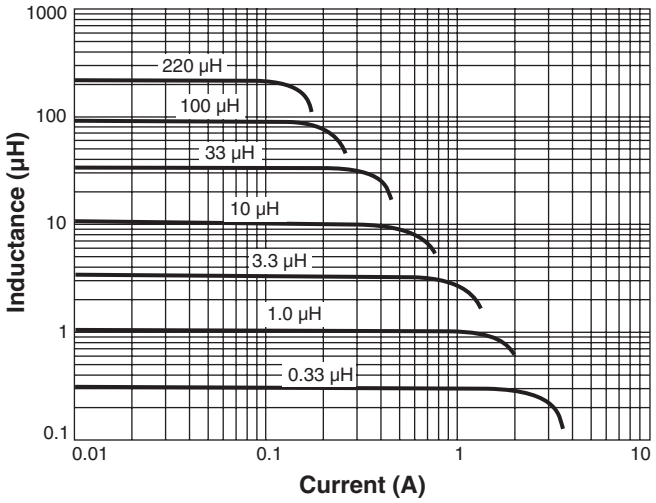
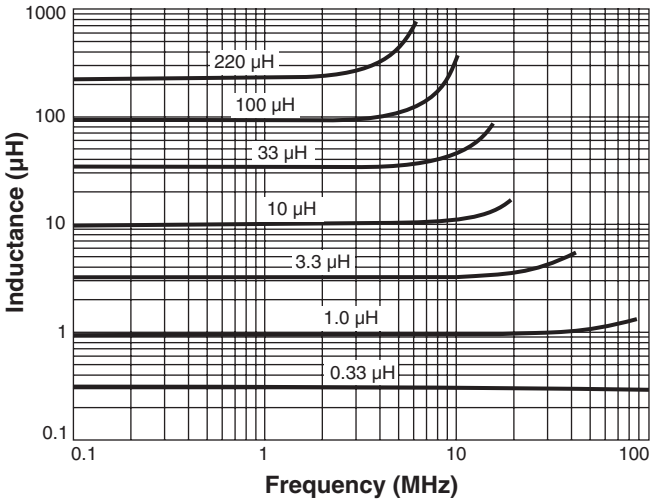
Document 646-1 Revised 09/24/13

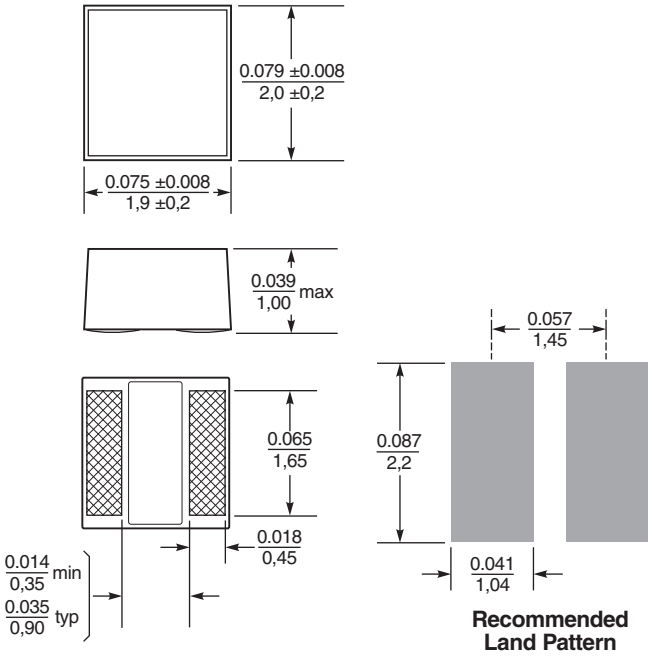
SMT Power Inductors – XPL2010 Series

Typical L vs Current



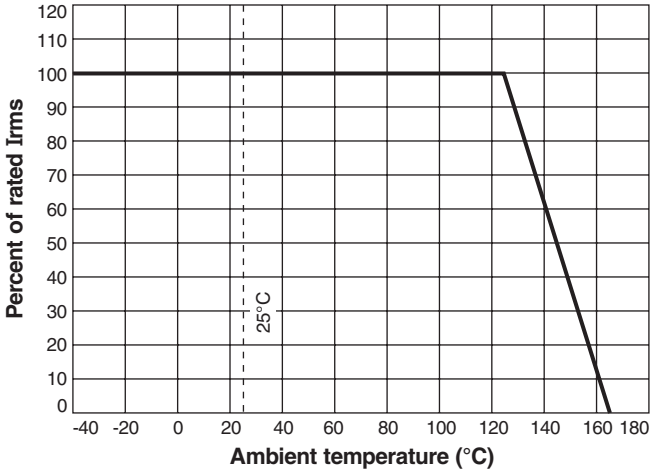
Typical L vs Frequency





Dimensions are in inches / mm

Typical Irms Derating



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Document 646-2 Revised 09/24/13