

Power Inductors – XPL2010 Series



- Ultra-miniature, magnetically shielded power inductors
- AEC-Q200 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		SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶	
		nom	max		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
XPL2010-183ML	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.



www.coilcraft.com

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 646-1 Revised 09/24/13

© Coilcraft Inc. 2015

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.

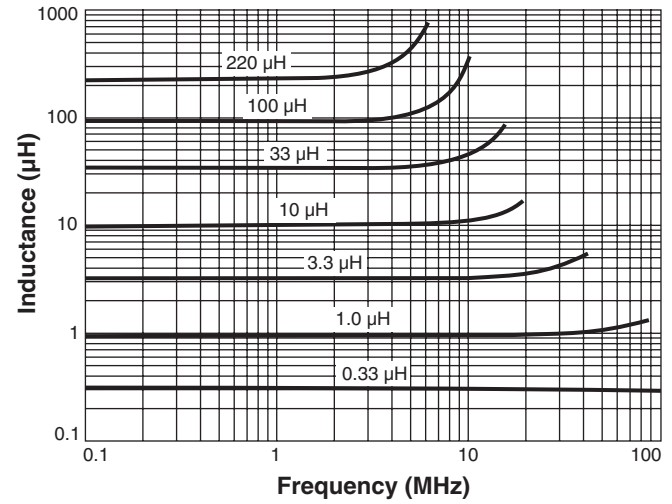


SMT Power Inductors – XPL2010 Series

Typical L vs Current

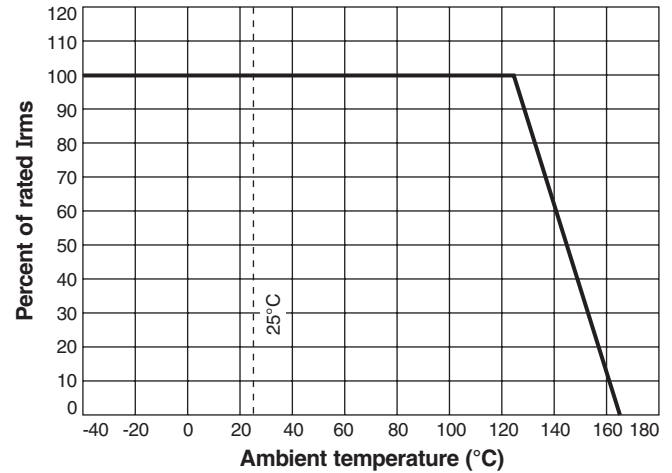


Typical L vs Frequency



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

Typical 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 646-2 Revised 09/24/13
 © Coilcraft Inc. 2015
 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.