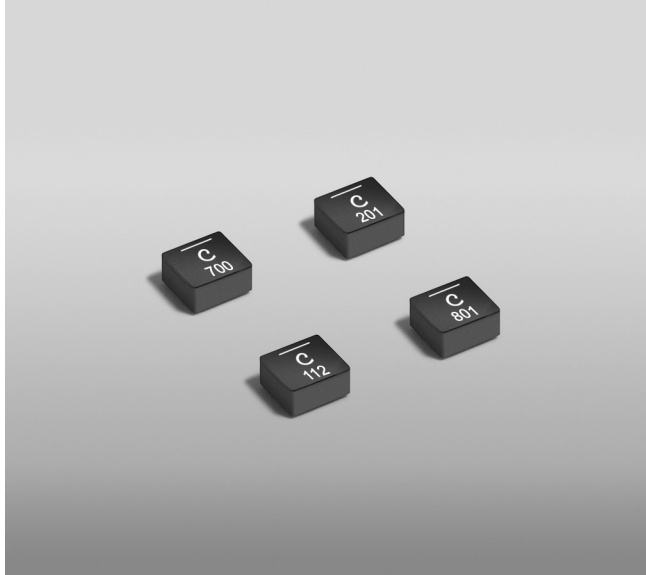


Shielded Power Inductors XEL3520



- AEC-200 Grade 1 (–40°C to +125°C)
- Extremely low DCR and ultra low AC losses for high switching frequencies (2 to 5 MHz)
- Superior current handling with soft saturation characteristics
- Can withstand high current spike

Designer's Kit C465 contains 3 each of all values of the XEL3515, XEL3520 and XEL3530 series

Core material Composite

Environment RoHS compliant, halogen free

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

Weight 105 – 111 mg

Operating voltage 0 – 80 V

Ambient temperature –40°C to +125°C with (40°C rise) Irms current.

Maximum part temperature +165°C (ambient + temp rise).

Storage temperature Component: –55°C to +165°C.

Tape and reel packaging: –55°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)

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 (mOhms) ³		SRF typ ⁴ (MHz)	Isat (A) ⁵			Irms (A) ⁶	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
XEL3520-700ME_	0.07	2.45	2.85	471	9.7	13.0	18.5	19.8	27.2
XEL3520-131ME_	0.13	3.50	4.05	294	7.2	9.8	13.8	18.9	25.4
XEL3520-201ME_	0.20	4.90	5.65	227	5.7	8.6	11.8	14.8	19.9
XEL3520-331ME_	0.33	8.00	9.20	158	3.9	6.2	8.7	10.3	13.7
XEL3520-471ME_	0.47	9.44	10.85	135	3.7	5.7	8.0	9.2	12.1
XEL3520-561ME_	0.56	14.50	16.70	129	3.3	5.4	7.3	7.6	10.1
XEL3520-801ME_	0.80	20.50	23.55	94	2.5	4.0	5.6	6.3	8.3
XEL3520-112ME_	1.1	31.50	36.25	80	2.2	3.5	5.0	4.0	5.4
XEL3520-122ME_	1.2	35.00	40.25	70	2.0	3.2	4.8	3.8	5.2

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

XEL3520-122MEC

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

Special order: T = RoHS tin-silver-copper (95.5/4/0.5) or S = non-RoHS tin-lead (63/37).

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape (1000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (3000 parts per full reel).

2. Inductance tested at 1 MHz, 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.

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.

7. Electrical specifications at 25°C.

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

Irms Testing

Irms testing was performed on 0.75 inch wide × 0.25 inch thick copper traces in still air.

Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.



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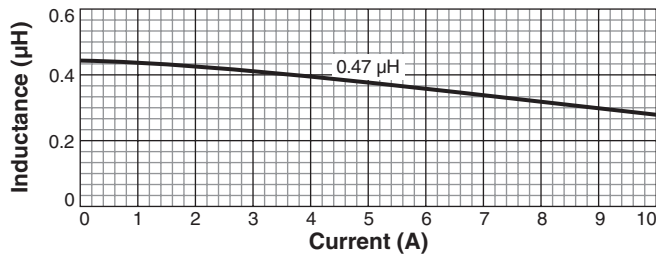
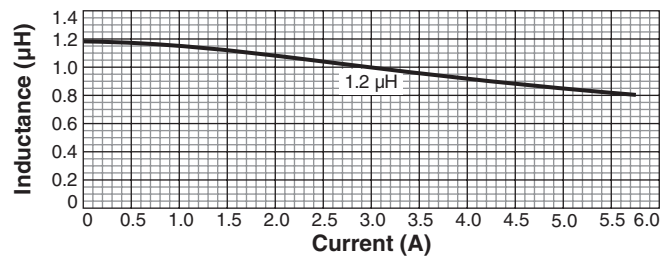
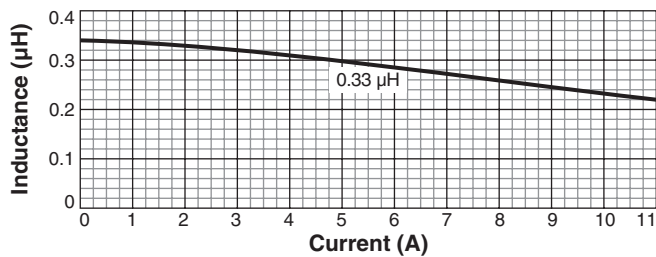
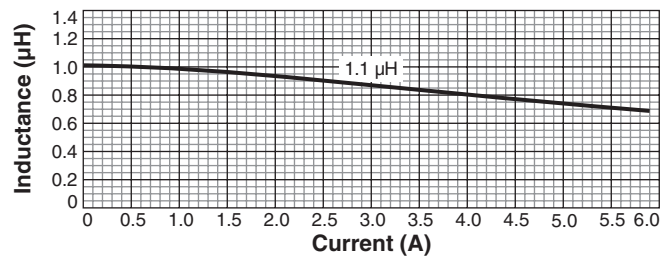
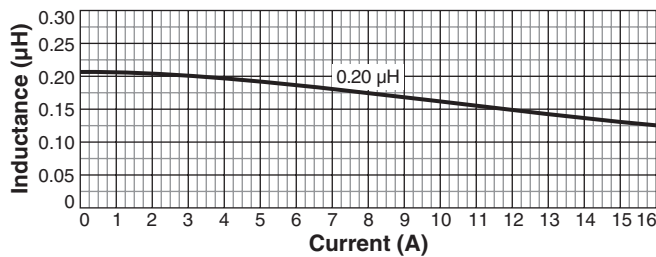
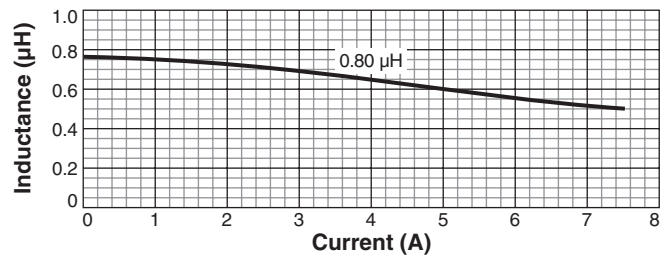
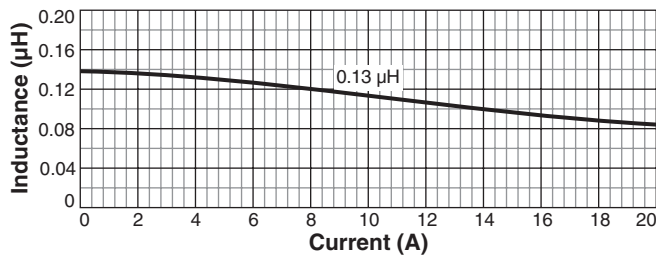
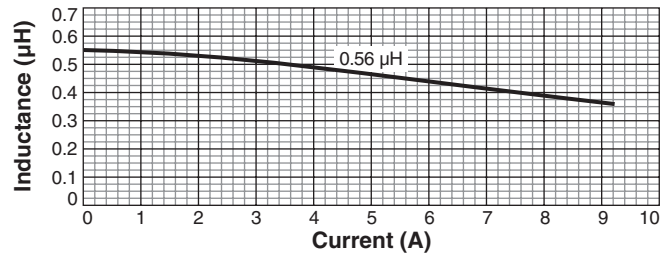
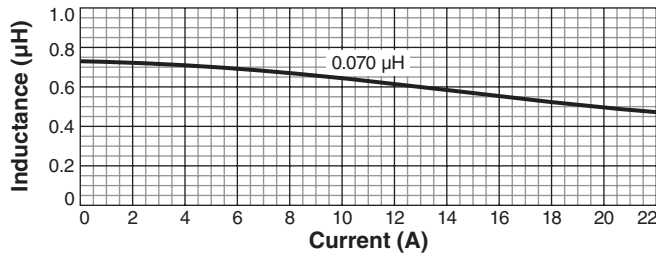
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Shielded Power Inductors – XEL3520

L vs Current



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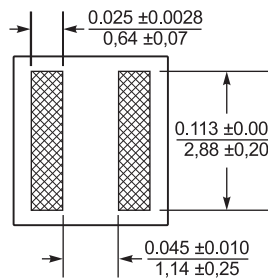
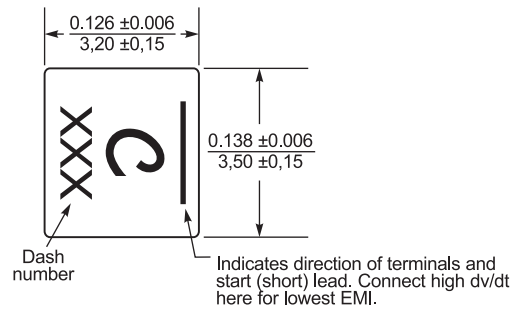
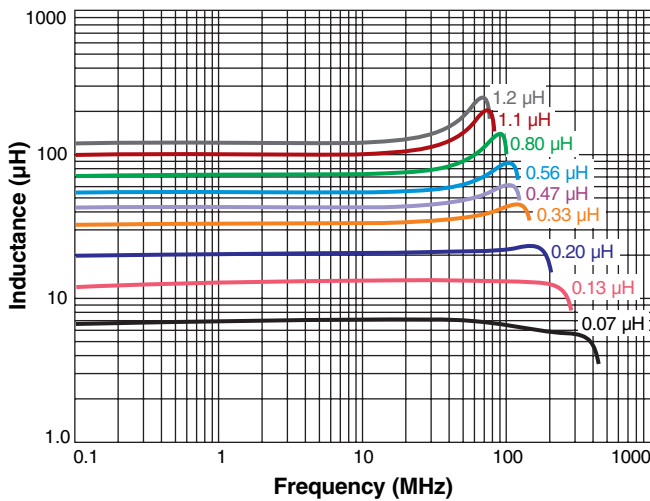
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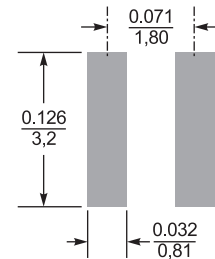


Shielded Power Inductors – XEL3520

L vs Frequency

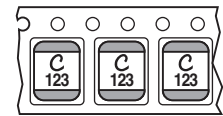


Recommended Land Pattern



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

Packaging 1000/7" reel; 3000/13" reel
Plastic tape: 12 mm wide, 0.21 mm thick,
8 mm pocket spacing, 2.2 mm pocket depth



Part orientation in tape



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Coilcraft:

<u>XEL3520-471MED</u>	<u>XEL3520-201MED</u>	<u>XEL3520-131MED</u>	<u>XEL3520-131MEB</u>	<u>XEL3520-122MEC</u>	<u>XEL3520-331MEB</u>
<u>XEL3520-700MEB</u>	<u>XEL3520-561MED</u>	<u>XEL3520-471MEB</u>	<u>XEL3520-700MEC</u>	<u>XEL3520-331MEC</u>	<u>XEL3520-112MED</u>
<u>XEL3520-700MED</u>	<u>XEL3520-801MEB</u>	<u>XEL3520-561MEB</u>	<u>XEL3520-561MEC</u>	<u>XEL3520-801MEC</u>	<u>XEL3520-471MEC</u>
<u>XEL3520-201MEC</u>	<u>XEL3520-331MED</u>	<u>XEL3520-122MED</u>	<u>XEL3520-122MEB</u>	<u>XEL3520-112MEB</u>	<u>XEL3520-112MEC</u>
<u>XEL3520-801MED</u>	<u>XEL3520-131MEC</u>	<u>XEL3520-201MEB</u>			