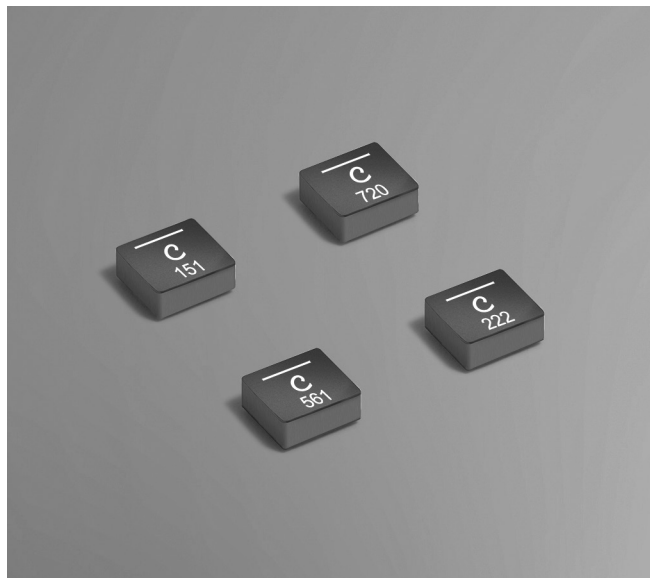


**VERY LOW AC  
AND DC LOSSES**

# Shielded Power Inductors XEL3515



- AEC-Q200 Grade 1 qualified
- 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.

**Weight** 77 – 82 mg

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

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

**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

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Inductance <sup>2</sup> ±20% (nH)	DCR (mOhms) <sup>3</sup>		SRF typ <sup>4</sup> (MHz)	Isat (A) <sup>5</sup>			Irms (A) <sup>6</sup>	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
XEL3515-720ME_	72	2.85	3.15	465	7.0	10.5	16.0	17.9	23.6
XEL3515-151ME_	150	4.80	5.30	270	5.5	9.0	12.5	13.0	17.5
XEL3515-221ME_	220	7.80	8.60	220	4.8	7.0	10.0	9.6	12.7
XEL3515-351ME_	350	11.8	13.0	150	3.3	5.8	8.0	8.5	11.4
XEL3515-561ME_	560	21.5	23.7	120	3.0	4.5	6.5	6.0	8.1

1. When ordering, please specify **packaging** code:

**XEL3515-561MEC**

**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (1000 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 (3500 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 x 0.25 inch thick copper traces in still air.

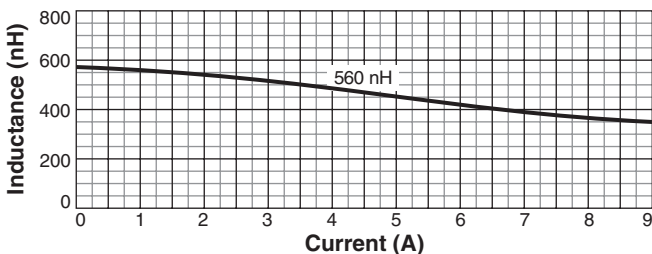
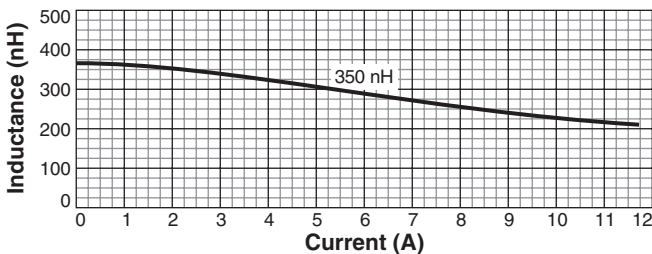
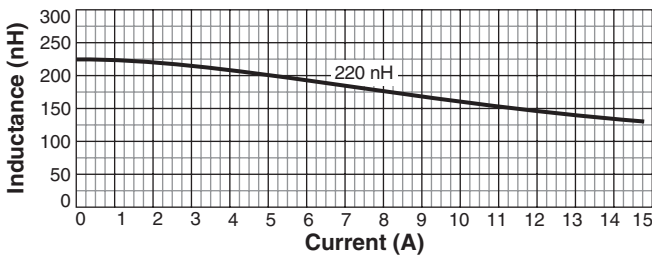
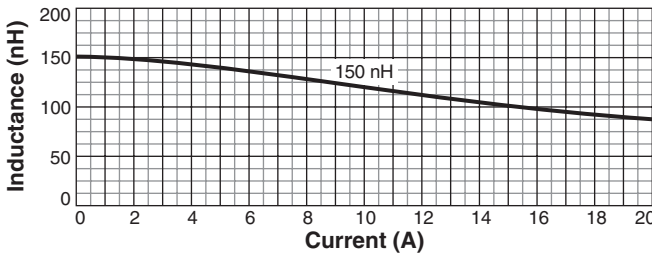
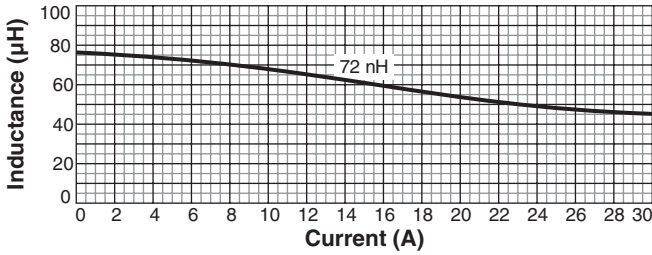
Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.

**VERY LOW AC  
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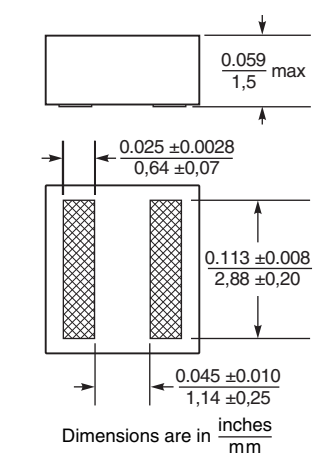
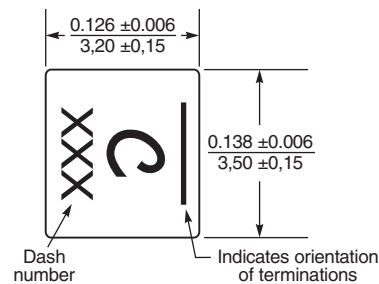
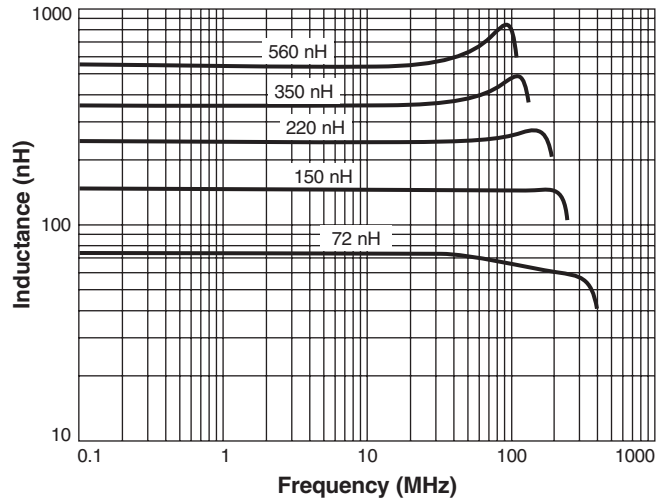
# Shielded Power Inductors – XEL3515



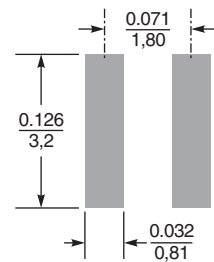
## L vs Current



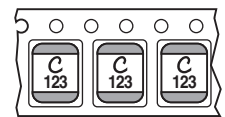
## L vs Frequency



### Recommended Land Pattern



**Packaging** 1000/7" reel; 3500/13" reel  
 Plastic tape: 12 mm wide, 0.23 mm thick,  
 8 mm pocket spacing, 1.8 mm pocket depth



Part orientation in tape



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