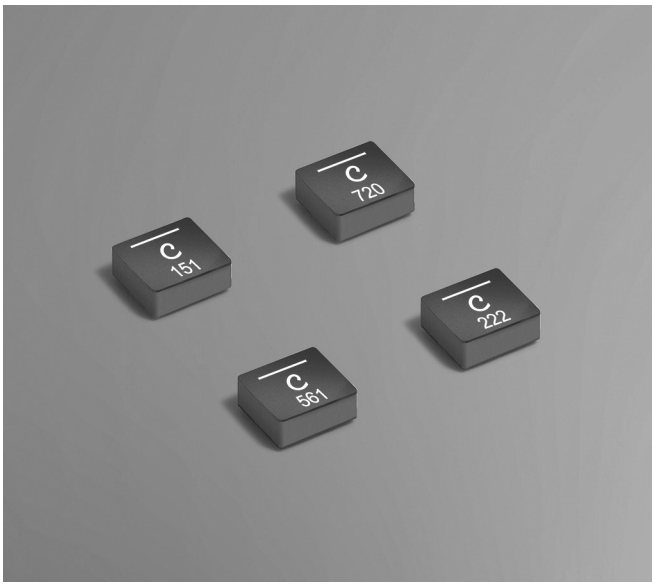
VERY LOW AC AND DC LOSSES

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

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
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
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% (nH)	DCR (mOhms)[3] typ	DCR (mOhms)[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
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 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 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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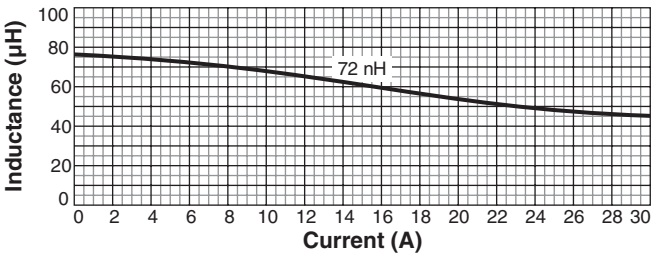
RoHS COMPLIANT

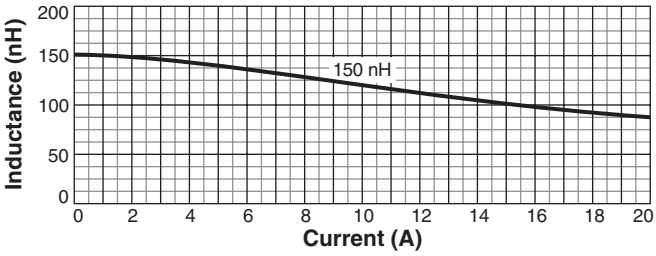
Halogen Free

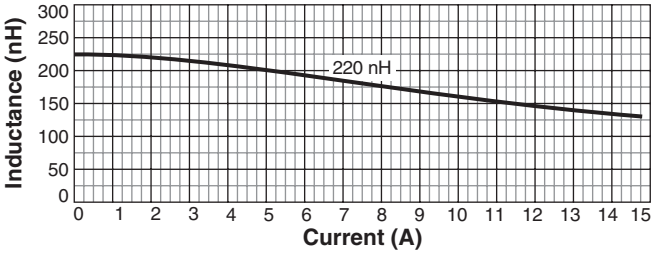
AEC Q200 +125°C

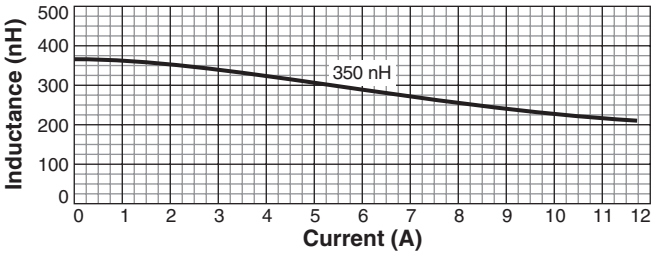
Shielded Power Inductors – XEL3515

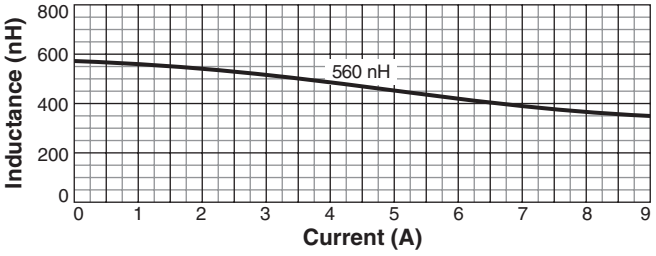
L vs Current



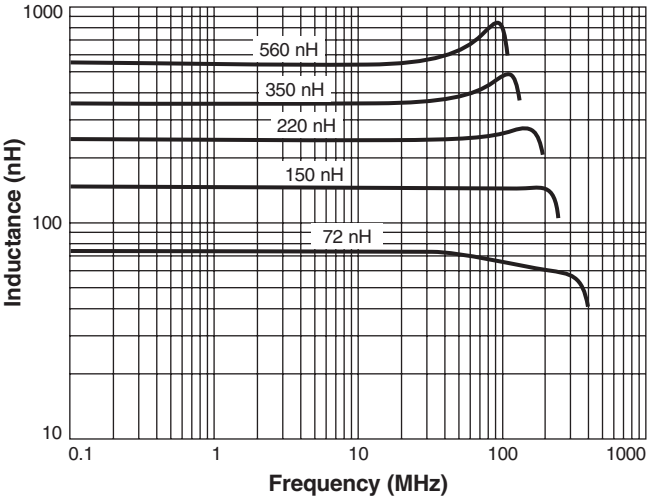


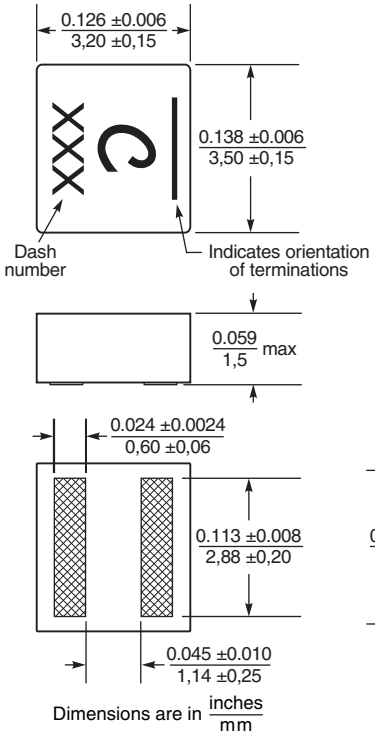


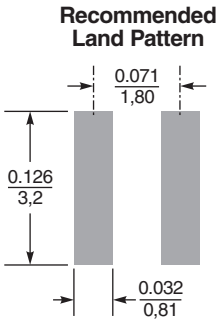




L vs Frequency







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