**High Voltage Shielded Power Inductor XEL4030V**

- Extremely low DCR and ultra low AC losses for high switching frequencies (2 to 5 MHz)
- High-voltage rating of 120 V—50% higher than the standard series. Learn more about Voltage Ratings for Inductors
- AEC-Q200 Grade 1 (−40°C to +125°C)
- Superior current handling with soft saturation characteristics
- Can withstand high current spikes
- Designed for high temperature applications

**Core material** Composite

**Environment** RoHS compliant, halogen free

**Terminations** RoHS compliant, tin-silver over copper.

**Weight** 0.28 g

**Operating voltage**: 0 – 120 V

**Ambient temperature** −40°C to +125°C with (40°C) 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

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

0.48 per billion hours / 2.08E+09 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.

**Extremely low DCR and ultra low AC losses for high switching frequencies (2 to 5 MHz)**

**High-voltage rating of 120 V—50% higher than the standard series. Learn more about Voltage Ratings for Inductors**

**AEC-Q200 Grade 1 (−40°C to +125°C)**

**Superior current handling with soft saturation characteristics**

**Can withstand high current spikes**

**Designed for high temperature applications**

### Specifications

<table>
<thead>
<tr>
<th>Part number1</th>
<th>Inductance2 (±20% (µH))</th>
<th>DCR (mOhms)3 (typ)</th>
<th>DCR (mOhms)3 (max)</th>
<th>SRF typ4 (MHz)</th>
<th>Isat5 (A)</th>
<th>Irms (A)6 (20°C rise)</th>
<th>Irms (A)6 (40°C rise)</th>
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<tbody>
<tr>
<td>XEL4030V-101ME</td>
<td>0.10</td>
<td>1.50</td>
<td>1.80</td>
<td>240</td>
<td>30.0</td>
<td>20.4</td>
<td>25.8</td>
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<td>2.15</td>
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<td>155</td>
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</table>

1. When ordering, please specify packaging code:

   XEL4030V-682MEC

   **Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (500 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer ($25 charge).

   D = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (2000 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 an inductance drop of 30% (typ) 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.

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**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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L vs Current

**VERY LOW AC AND DC LOSSES**

![Graphs showing the relationship between inductance (µH) and current (A) for different inductance levels.](image-url)
**High Voltage Shielded Power Inductor – XEL4030V**

**L vs Current**

![Graph showing L vs Current](image)

**Typical L vs Frequency**

![Graph showing L vs Frequency](image)

**Dash number**

Indicates direction of terminals and start (short) lead. Connect high dv/dt here for lowest EMI.

**Recommended Land Pattern**

![Recommended Land Pattern](image)

Dimensions are in inches/mm

**Packaging**

500/7” reel; 2000/13” reel Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing, 3.25 mm pocket depth

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Please check web site for latest information.