Shielded Power Inductors – XEL6060

- 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 spikes

Designer’s Kit C466 contains 3 of each value
Core material Composite
Environment RoHS compliant, halogen free
Terminations RoHS compliant tin-silver (96.5/3.5) over copper. Other terminations available at additional cost.
Weight 1.23 – 3.11 g
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). Derating.
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)

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance (µH)</th>
<th>DCR (mΩ) typ</th>
<th>DCR (mΩ) max</th>
<th>SRF (MHz) 10% drop</th>
<th>Isat (A)</th>
<th>Irms (A) 20°C rise</th>
<th>Irms (A) 40°C rise</th>
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<tbody>
<tr>
<td>XEL6060-331ME</td>
<td>0.33</td>
<td>1.98</td>
<td>2.20</td>
<td>79.0</td>
<td>13.0</td>
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<td>1.9</td>
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<td>3.8</td>
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</tbody>
</table>

1. When ordering, please specify termination and packaging codes:
   XEL6060-333ME
   Termination: E = RoHS compliant tin-silver over copper.
   Special order: T = RoHS tin-silver-copper (96.5/3.5) or B = non-RoHS tin-lead (63/37).
   Packaging: C = 7” machine-ready reel. EIA-481 embossed plastic tape (250 parts per 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 (750 parts per full reel).
   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.

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. Click for temperature derating information.
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. Click for temperature derating information.
7. Electrical specifications at 25°C.
   Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

I rms Testing
I rms 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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Composites
Temperature: Component: –55°C to +165°C
Storage temperature Component: –55°C to +165°C.
Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles
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Tools & software
Document 1359-1 Revised 08/15/23
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.
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L vs Current

0.33 µH

2.2 µH

0.55 µH

2.7 µH

0.56 µH

4.7 µH

0.82 µH

6.8 µH

1.0 µH

8.2 µH

1.5 µH

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High Temperature

L vs Currency

L vs Frequency

Recommended Land Pattern

Dimensions are in inches mm

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

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Click to View Pricing, Inventory, Delivery & Lifecycle Information:

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<td>XEL6060-102MEC</td>
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