Chip Inductors – 0201AF (0603)

- Industry’s highest inductance 0201 chip inductor – up to 200 nH
- Ferrite construction for high impedance and high current handling
- Optimized for RF isolation in applications ranging from 900 MHz – 9 GHz
- Low DCR – as low as 0.15 Ohms
- Low losses for low frequency filter applications

Specifications

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance² ±10% (nH)</th>
<th>Impedance typ (Ohms)</th>
<th>SRF typ³ (MHz)</th>
<th>DCR max⁴ (Ohms)</th>
<th>I rms⁵ (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>700 MHz</td>
<td>900 MHz</td>
<td>1.7 GHz</td>
<td>3400</td>
</tr>
<tr>
<td>0201AF-330XKR</td>
<td>33</td>
<td>135</td>
<td>170</td>
<td>345</td>
<td>2900</td>
</tr>
<tr>
<td>0201AF-510XKR</td>
<td>51</td>
<td>200</td>
<td>255</td>
<td>480</td>
<td>2600</td>
</tr>
<tr>
<td>0201AF-680XKR</td>
<td>68</td>
<td>270</td>
<td>350</td>
<td>750</td>
<td>2350</td>
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<tr>
<td>0201AF-910XKR</td>
<td>91</td>
<td>335</td>
<td>425</td>
<td>830</td>
<td>2100</td>
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<tr>
<td>0201AF-111XKR</td>
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<td>465</td>
<td>625</td>
<td>1560</td>
<td>1700</td>
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<tr>
<td>0201AF-141XKR</td>
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<td>530</td>
<td>680</td>
<td>1380</td>
<td>2000</td>
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<tr>
<td>0201AF-171XKR</td>
<td>170</td>
<td>680</td>
<td>890</td>
<td>1910</td>
<td>1850</td>
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<tr>
<td>0201AF-201XKR</td>
<td>200</td>
<td>850</td>
<td>1130</td>
<td>2620</td>
<td>1700</td>
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</tbody>
</table>

1. When ordering, please specify packaging code:
   - W = 7” machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel).
   - U = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter W instead.

2. Inductance measured at 7.9 MHz using a Coilcraft SMD-F test fixture and Coilcraft-provided correlation pieces with an Agilent/HP 4286 impedance analyzer.

3. SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.

4. DCR measured on Cambridge Technology micro-ohmmeter and a Coilcraft CCF858 test fixture.

5. Current that causes a 15°C temperature rise from 25°C ambient. Because of their open construction, these parts will not saturate.

Environmental

- RoHS compliant without exemption, halogen free
- Terminations RoHS compliant matte tin over nickel over silver-platinum-glass frit.

Weight

- 0.12 – 0.20 mg

Ambient temperature

- –40°C to +85°C with Irms current

Maximum part temperature

- +100°C (ambient + temp rise)

Storage temperature

- Component: –40°C to +100°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

Temperature Coefficient of Inductance (TCL)

- +25 to +150 ppm/°C

Moisture Sensitivity Level (MSL)

- 1 (unlimited floor life at <30°C / 85% relative humidity)

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

- One per billion hours / one billion hours, calculated per Telcordia SR-332

Packaging

- 2000 per 7” reel. Paper tape: 8 mm wide, 0.68 mm thick, 2 mm pocket spacing

PCB washing

- Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.

Core material Ferrite

Terminal wraparound:

- Approx 0.006/0.15 both ends

Recommended Land Pattern

<table>
<thead>
<tr>
<th>A max</th>
<th>B max</th>
<th>C max</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.023</td>
<td>0.014</td>
<td>0.018</td>
<td>0.004</td>
<td>0.009</td>
<td>0.007</td>
<td>0.018</td>
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<tr>
<td>0.58</td>
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<td>0.46</td>
<td>0.10</td>
<td>0.23</td>
<td>0.18</td>
<td>0.46</td>
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Accurate Precision Measurements

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This product may not be used in medical or high risk applications without prior Coilcraft approval.

Specifications subject to change without notice.

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