Shielded Power Inductors – PFL1610

• Low cost, low profile, 0603 size power inductor
• Current handling of much larger inductors; up to 2350 mA.

Environmental  RoHS compliant, halogen free
Terminations  RoHS compliant matte tin over nickel over silver-platinum-glass frit. Other terminations available at additional cost.
Core material  Composite
Core and winding loss  See www.coilcraft.com/coreloss
Weight  5.4 – 5.7 mg
Ambient temperature  –40°C to +85°C with (40°C rise) I rms current.
Maximum part temperature  +125°C (ambient + temp rise). Derating.
Storage temperature  Component: –40°C to +125°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  2000 per 7” reel  Paper tape: 8 mm wide, 1.0 mm thick, 4 mm pocket spacing
PCB washing  Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

<table>
<thead>
<tr>
<th>Part number</th>
<th>Inductance ±20% (µH) typ</th>
<th>DCR (mOhms) SRF typ (MHz)</th>
<th>Isat (mA) 10% drop</th>
<th>Irms (mA) 20°C rise</th>
<th>20% drop</th>
<th>30% drop</th>
<th>40°C rise</th>
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</thead>
<tbody>
<tr>
<td>PFL1610-331ME</td>
<td>0.33 85 98 644</td>
<td>1140 1860 2350</td>
<td>1100 1500</td>
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<tr>
<td>PFL1610-471ME</td>
<td>0.47 183 205 540</td>
<td>1000 1700 1820</td>
<td>770 1000</td>
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<tr>
<td>PFL1610-561ME</td>
<td>0.56 143 160 475</td>
<td>800 1400 1600</td>
<td>700 900</td>
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<tr>
<td>PFL1610-681ME</td>
<td>0.68 203 223 423</td>
<td>800 1500 1630</td>
<td>720 970</td>
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<tr>
<td>PFL1610-102ME</td>
<td>1.0 331 365 351</td>
<td>650 1000 1260</td>
<td>570 750</td>
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<tr>
<td>PFL1610-222ME</td>
<td>2.2 1120 1230 105</td>
<td>330 555 660</td>
<td>280 380</td>
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<tr>
<td>PFL1610-472ME</td>
<td>4.7 1560 1720 85</td>
<td>290 480 560</td>
<td>230 310</td>
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</tbody>
</table>

1. When ordering, please specify packaging codes:

PFL1610-472MEW
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 tested at 7.9 MHz, 0.1 Vrms using a Coilcraft SMD-F test fixture with an Agilent/HP 4286 impedance analyzer and Coilcraft-provided correlation pieces.
3. DCR measured using a micro-ohmmeter.
4. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.
5. DC current at 25°C that causes the specified inductance drop 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.

Support & FAQ
Visit our website:
www.coilcraft.com
PFL1610 Series

L vs Current

L vs Frequency

Terminal wraparound:
approx 0.007/0.18 both ends

Recommended Land Pattern

Dimensions are in inches/mm