Shielded Power Inductors – PFL4517

- Low cost, low profile miniature power inductor
- Only 1.7 mm high; requires a mere 16 mm² of board space
- Provides current handling of much larger inductors; up to 6.5 A.

Core material  Composite
Core and winding loss  See www.coilcraft.com/coreloss
Environmental  RoHS compliant, halogen free
Terminations  RoHS compliant, matte tin over nickel over silver-platinum-glass frit. Other terminations available at additional cost.
Weight  89.8 mg
Ambient temperature  -40°C to +85°C with (40°C rise) Irms 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 reflo ws 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; 5000/13” reel. Plastic tape: 12 mm wide, 0.21 mm thick, 8 mm pocket spacing, 1.65 mm pocket depth
PCB washing  Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

Inductance²  ±20% (µH) typ   max

DCR (mOhms)³  typ   max

SRF typ⁴  MHz

Isat (A)⁵  10% drop   20% drop   30% drop

Irms (A)⁶  20°C rise   40°C rise

<table>
<thead>
<tr>
<th>Part number⁷</th>
<th>Inductance²</th>
<th>DCR (mOhms)³</th>
<th>SRF typ⁴</th>
<th>Isat (A)⁵</th>
<th>Irms (A)⁶</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFL4517-681ME_ 0.68</td>
<td>40</td>
<td>50</td>
<td>375</td>
<td>4.1</td>
<td>6.0</td>
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<tr>
<td>PFL4517-102ME_ 1.0</td>
<td>50</td>
<td>60</td>
<td>300</td>
<td>3.5</td>
<td>4.8</td>
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<tr>
<td>PFL4517-222ME_ 2.2</td>
<td>78</td>
<td>95</td>
<td>235</td>
<td>2.7</td>
<td>4.0</td>
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<td>PFL4517-332ME_ 3.3</td>
<td>150</td>
<td>180</td>
<td>205</td>
<td>2.2</td>
<td>2.9</td>
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<tr>
<td>PFL4517-472ME_ 4.7</td>
<td>210</td>
<td>250</td>
<td>185</td>
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<td>PFL4517-562ME_ 5.6</td>
<td>240</td>
<td>290</td>
<td>170</td>
<td>1.7</td>
<td>2.4</td>
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<td>PFL4517-822ME_ 8.2</td>
<td>390</td>
<td>460</td>
<td>150</td>
<td>1.4</td>
<td>2.1</td>
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<tr>
<td>PFL4517-103ME_ 10</td>
<td>620</td>
<td>700</td>
<td>97</td>
<td>1.0</td>
<td>1.4</td>
</tr>
</tbody>
</table>

1. When ordering, please specify termination and packaging codes:

PFL4517-103ME⁷
Termination:  E = RoHS compliant matte tin over nickel over silver.
Special order, added cost:
Q = RoHS tin-silver-copper (95.5/4/0.5) or P = non-RoHS tin-lead (63/37).
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 (5000 parts per full reel).

2. Inductance tested at 100 kHz, 0.1 Vrms, 0Adc.
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.
PFL4517 Series

L vs Current

L vs Frequency

Terminal wraparound:
approx 0.01/0.254 both ends

Recommended Land Pattern

Dimensions are in:
- inches
- mm

RoHS Compliant
Halogen Free

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