SMD Semi Shielded Power Chip Inductor

PCFV80

Dimensions: inches (mm)

Inductance A(mm) B(mm) B'(mm) C(mm) D(mm) E(mm) F(mm)

< 10µH
≥ 10µH

Allied Part Number

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Inductance (µH)</th>
<th>Tolerance</th>
<th>DCR (mΩ)</th>
<th>Irms (A)</th>
<th>Isat (A)</th>
<th>Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCFV80-1R0_-RC</td>
<td>1.0</td>
<td>M.N</td>
<td>8.2</td>
<td>8.50</td>
<td>8.00</td>
<td>13.80</td>
</tr>
<tr>
<td>PCFV80-1R4_-RC</td>
<td>1.4</td>
<td>M.N</td>
<td>10.0</td>
<td>8.20</td>
<td>7.80</td>
<td>11.80</td>
</tr>
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<td>PCFV80-1R5_-RC</td>
<td>1.5</td>
<td>M.N</td>
<td>10.0</td>
<td>8.00</td>
<td>7.70</td>
<td>11.50</td>
</tr>
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<td>PCFV80-2R2_-RC</td>
<td>2.2</td>
<td>M.N</td>
<td>11.5</td>
<td>7.40</td>
<td>6.90</td>
<td>9.80</td>
</tr>
<tr>
<td>PCFV80-3R3_-RC</td>
<td>3.3</td>
<td>M.N</td>
<td>15.0</td>
<td>6.60</td>
<td>6.20</td>
<td>8.00</td>
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<tr>
<td>PCFV80-4R7_-RC</td>
<td>4.7</td>
<td>L,M,N</td>
<td>19.5</td>
<td>8.00</td>
<td>3.30</td>
<td>6.70</td>
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<td>PCFV80-5R6_-RC</td>
<td>5.6</td>
<td>L,M,N</td>
<td>22.0</td>
<td>8.40</td>
<td>2.50</td>
<td>6.20</td>
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<td>PCFV80-6R8_-RC</td>
<td>6.8</td>
<td>L,M,N</td>
<td>25.0</td>
<td>8.20</td>
<td>2.40</td>
<td>5.60</td>
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<tr>
<td>PCFV80-100_-RC</td>
<td>10</td>
<td>K,L,M,N</td>
<td>30.0</td>
<td>6.40</td>
<td>2.20</td>
<td>4.00</td>
</tr>
<tr>
<td>PCFV80-150_-RC</td>
<td>15</td>
<td>K,L,M,N</td>
<td>50.0</td>
<td>5.60</td>
<td>2.00</td>
<td>4.00</td>
</tr>
<tr>
<td>PCFV80-220_-RC</td>
<td>22</td>
<td>K,L,M,N</td>
<td>73.0</td>
<td>4.90</td>
<td>1.60</td>
<td>3.10</td>
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<tr>
<td>PCFV80-330_-RC</td>
<td>33</td>
<td>K,L,M,N</td>
<td>100</td>
<td>3.60</td>
<td>1.00</td>
<td>2.60</td>
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<tr>
<td>PCFV80-470_-RC</td>
<td>47</td>
<td>K,L,M,N</td>
<td>135</td>
<td>2.30</td>
<td>0.70</td>
<td>2.20</td>
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<td>PCFV80-560_-RC</td>
<td>56</td>
<td>K,L,M,N</td>
<td>160</td>
<td>1.75</td>
<td>0.50</td>
<td>1.90</td>
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<tr>
<td>PCFV80-660_-RC</td>
<td>68</td>
<td>K,L,M,N</td>
<td>205</td>
<td>1.85</td>
<td>0.70</td>
<td>1.90</td>
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<tr>
<td>PCFV80-820_-RC</td>
<td>82</td>
<td>K,L,M,N</td>
<td>230</td>
<td>1.20</td>
<td>0.70</td>
<td>1.50</td>
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<tr>
<td>PCFV80-101_-RC</td>
<td>100</td>
<td>K,L,M,N</td>
<td>300</td>
<td>1.00</td>
<td>0.70</td>
<td>1.50</td>
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<tr>
<td>PCFV80-121_-RC</td>
<td>120</td>
<td>K,L,M,N</td>
<td>350</td>
<td>0.90</td>
<td>0.70</td>
<td>1.50</td>
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<td>PCFV80-151_-RC</td>
<td>150</td>
<td>K,L,M,N</td>
<td>410</td>
<td>0.80</td>
<td>0.70</td>
<td>1.50</td>
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<td>PCFV80-181_-RC</td>
<td>180</td>
<td>K,L,M,N</td>
<td>490</td>
<td>0.90</td>
<td>0.70</td>
<td>1.50</td>
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<td>PCFV80-221_-RC</td>
<td>220</td>
<td>K,L,M,N</td>
<td>610</td>
<td>0.85</td>
<td>0.90</td>
<td>1.50</td>
</tr>
</tbody>
</table>

*Insert desired tolerance designator: K = ±10%, L = ±15%, M = ±20%, N= ±30%

All specifications subject to change without notice.

Features
- Semi Magnetically Shielded
- High Current
- Low DC Resistance
- Low Profile
- MSL Level I

Electrical
- Inductance Range: 1.0µH - 220µH
- Operating Temp: -40°C to +125°C
- Isat: Current at which the Inductance will drop by approximately 30% of its initial value.
- Irms: Based on a temp rise of ΔT = 40°C typical above 25°C ambient.

Solderability
- Pre-Heat: 150°C, 1 Min.
- Solder: Sn96.5%/Ag3%/Cu0.5%
- Solder Temp: 245°C ±5°C
- Flux: Rosin 9.5%
- Dip Time: 4 ±1 Sec.

Resistance to Soldering Heat
- Temperature: 260°C ±5°C
- Time: 10 ±1 Sec
- Temperature Ramp/Immersion and Emersion Rate: 25mm/s ±6mm/s
- Number of Heat Cycles: 1

Test Equipment
- (L): HP4284A, CH11025, CH3302, CH1320, and CS1320S LCR Meter.
- DCR: CH16502, Agilent 33420A Micro-Ohm Meter.

Physical
- Packaging: 1000 per Tape and Reel
- Marking: EIA Inductance code

Reflow Solder Profile

Pre-Heating
- Temperature: 25°C
- Time: 60-180s
- Soldering
- Temperature: 217°C
- Time: 60-150s
- Natural Cooling
- Time: 480s

Reflow times: 1 times max.

RoHS

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Typical Performance Curves

PCFV80

DC CURRENT (A) vs. TEMP. RISE(°C)

DC CURRENT (A) vs. INDUCTANCE (µH)

PCFV80 (1.0µH - 3.3µH)

PCFV80 (4.7µH - 22µH)

PCFV80 (33µH - 82µH)

PCFV80 (100µH - 220µH)
**SMD Semi Shielded Power Chip Inductor**

**PCFV80**

### Packaging Information

#### (1) Reel Dimension

![Reel Dimension Diagram]

#### (2) Tape Dimension

![Tape Dimension Diagram]

#### (3) Tearing Off Force

The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions (referenced ANSI/EIA-481-C-2003 of 4.11 standard).

<table>
<thead>
<tr>
<th>Room Temp. (℃)</th>
<th>Room Humidity (%)</th>
<th>Room atm (hPa)</th>
<th>Tearing Speed mm/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>5~35</td>
<td>45~85</td>
<td>860~1060</td>
<td>300</td>
</tr>
</tbody>
</table>

- **Storage Conditions**
  2. Temperature and humidity conditions: Less than 40°C and 60% RH.
  3. Recommended products should be used within 12 months from the time of delivery.
  4. The packaging material should be kept where no chlorine or sulfur exists in the air.

- **Transportation**
  1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
  2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
  3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

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**Application Notice**

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**RoHS**

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