**SMD SHIELDED POWER CHIP INDUCITOR**

**PCHP20CF**

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### Features

- Magnetically Shielded Construction
- Low Profile
- Low DC Resistance

### Electrical

- **Inductance Range:** .47 - 22µH
- **Tolerance:** 30% .47 - 1.5µH, 20% 2.2 - 22µH
- **Operating Temp:** -40°C to +125°C
- **MSL:** Level 1
- **Isat:** DC current at which the inductance drops approximately 30% from its value without current.
- **Irms:** DC current that causes the temperature rise (∆T = 40°C) from 25°C ambient.

### Resistance to Soldering Heat

- **Pre-Heat:** 150°C, 1Min
- **Solder Composition:** Sn96.5%, AG3%, Cu0.5%
- **Temperature:** 245±5°C
- **Flux for Lead Free:** Rosin 9.5%
- **Dip Time:** 4±1Sec
- **Depth:** Completely cover the termination

### Test Equipment

- (L): HP4284A, CH11025, CH3302, CH1320, CH1320S LCR Meter
- (DCR): CH16502, Agilent 33420A Micro-oHm Meter

### Physical

- **Packaging:** 2000 per 7" Reel
- **Marking:** EIA Code

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**Reflow Soldering**

**Pre-Heating**

**Soldering**

**Natural Cooling**

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**Dimensions:** Inches (mm)

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**Allied Part Number** | **Inductance (µH)** | **Tolerance (%)** | **Test Freq. (MHz, 0.1V)** | **DCR (Ω) ±20%** | **Isat (A) Typ** | **Isat (A) Max** | **Irms (A) Typ** | **Irms (A) Max** |
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>PCHP20CF-R47N-RC</td>
<td>.47</td>
<td>30</td>
<td>1</td>
<td>.044</td>
<td>3.00</td>
<td>2.70</td>
<td>2.60</td>
<td>2.35</td>
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<tr>
<td>PCHP20CF-R68N-RC</td>
<td>.68</td>
<td>30</td>
<td>1</td>
<td>.062</td>
<td>2.45</td>
<td>2.00</td>
<td>2.25</td>
<td>2.05</td>
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<tr>
<td>PCHP20CF-1R0N-RC</td>
<td>1.0</td>
<td>30</td>
<td>1</td>
<td>.080</td>
<td>1.95</td>
<td>1.80</td>
<td>1.75</td>
<td>1.60</td>
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<td>PCHP20CF-1R5N-RC</td>
<td>1.5</td>
<td>30</td>
<td>1</td>
<td>.130</td>
<td>1.65</td>
<td>1.46</td>
<td>1.40</td>
<td>1.26</td>
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<td>PCHP20CF-2R2M-RC</td>
<td>2.2</td>
<td>20</td>
<td>1</td>
<td>.145</td>
<td>1.45</td>
<td>1.26</td>
<td>1.35</td>
<td>1.20</td>
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<td>PCHP20CF-3R3M-RC</td>
<td>3.3</td>
<td>20</td>
<td>1</td>
<td>.245</td>
<td>1.05</td>
<td>0.90</td>
<td>1.05</td>
<td>0.95</td>
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<td>PCHP20CF-4R7M-RC</td>
<td>4.7</td>
<td>20</td>
<td>1</td>
<td>.360</td>
<td>0.85</td>
<td>0.77</td>
<td>1.00</td>
<td>0.96</td>
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<td>PCHP20CF-6R8M-RC</td>
<td>6.8</td>
<td>20</td>
<td>1</td>
<td>.500</td>
<td>0.80</td>
<td>0.72</td>
<td>0.70</td>
<td>0.55</td>
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<tr>
<td>PCHP20CF-100M-RC</td>
<td>10.0</td>
<td>20</td>
<td>1</td>
<td>.720</td>
<td>0.62</td>
<td>0.55</td>
<td>0.50</td>
<td>0.45</td>
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<tr>
<td>PCHP20CF-150M-RC</td>
<td>15.0</td>
<td>20</td>
<td>1</td>
<td>1.40</td>
<td>0.50</td>
<td>0.45</td>
<td>0.40</td>
<td>0.36</td>
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<tr>
<td>PCHP20CF-180M-RC</td>
<td>18.0</td>
<td>20</td>
<td>1</td>
<td>1.80</td>
<td>0.45</td>
<td>0.40</td>
<td>0.38</td>
<td>0.34</td>
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<tr>
<td>PCHP20CF-220M-RC</td>
<td>22.0</td>
<td>20</td>
<td>1</td>
<td>2.00</td>
<td>0.43</td>
<td>0.38</td>
<td>0.30</td>
<td>0.27</td>
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*All specifications subject to change without notice.*
SMD SHIELDED POWER CHIP INDUCTOR  
PCHP20CF

Typical Performance Curve

PCHP20CF-R47N-RC

PCHP20CF-R68N-RC

PCHP20CF-1R0N-RC

PCHP20CF-1R5N-RC

PCHP20CF-2R2M-RC

PCHP20CF-3R3M-RC

PCHP20CF-4R7M-RC

PCHP20CF-6R8M-RC

RoHS

ALLIED COMPONENTS INTERNATIONAL  www.alliedcomponents.com

949-356-1780

10/18/2017
SMD SHIELDED POWER CHIP INDUCTOR  PCHP20CF

Typical Performance Curve

- **PCHP20CF-100M-RC**
  - DC current: 0 to 0.8 A
  - Inductance: 0 to 20 µH

- **PCHP20CF-150M-RC**
  - DC current: 0 to 0.6 A
  - Inductance: 0 to 25 µH

- **PCHP20CF-180M-RC**
  - DC current: 0 to 0.5 A
  - Inductance: 0 to 30 µH

- **PCHP20CF-220M-RC**
  - DC current: 0 to 0.5 A
  - Inductance: 0 to 40 µH
Packaging Information

Reel Dimension

Tape Dimension

<table>
<thead>
<tr>
<th>Type</th>
<th>A(mm)</th>
<th>B(mm)</th>
<th>C(mm)</th>
<th>D(mm)</th>
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</thead>
<tbody>
<tr>
<td>178x8mm</td>
<td>8.4±1.0</td>
<td>50 Min</td>
<td>13±0.8</td>
<td>178±2.0</td>
</tr>
</tbody>
</table>

Tearing Off Force

The force for tearing off cover tape is 15 to 80 grams in the arrow direction under the following conditions.

<table>
<thead>
<tr>
<th>Room Temp. (°C)</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>
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</tbody>
</table>

Application Notice

- **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.