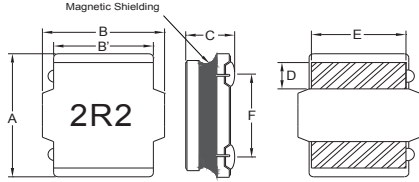


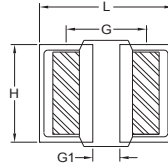


# SMD Semi Shielded Power Chip Inductor

# PCFV80



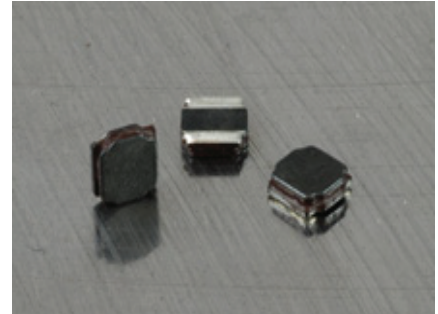
Dimensions: inches (mm)



Inductance	A(mm)	B(mm)	B'(mm)	C(mm)	D(mm)	E(mm)	F(mm)
<10μH	.315±.012	.315±.012	.248±.008	.165 (4.2) Max	.079±.012	.236±.012	.217±.012
≥10μH	(8.0±0.3)	(8.0±0.3)	(6.3±0.2)	.146±.012 (3.7±0.3)	(2.0±0.3)	(6.0±0.3)	(5.5±0.3)

Recommend Land pattern			
L(mm)	G(mm)	H(mm)	G1(mm)
.335 (8.5)	.217 (5.5)	.248 (6.3)	.098 (2.5)

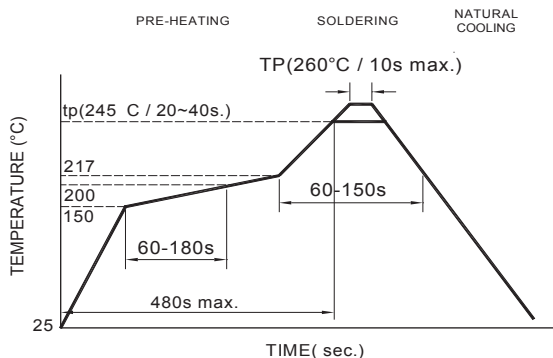
Note: Recommend solder paste thickness at 0.15mm and above.



Allied Part Number*	Inductance (μH) @1MHz, 1V	Tolerance	DCR (mΩ) ±20%	I <sub>rms</sub> (A) Typ	I <sub>rms</sub> (A) Max	I <sub>sat</sub> (A) Typ	I <sub>sat</sub> (A) Max	Marking
PCFV80-1R0_-RC	1.0	M,N	8.2	8.50	8.00	13.80	13.00	1R0
PCFV80-1R4_-RC	1.4	M,N	10.0	8.20	7.80	11.80	11.20	1R4
PCFV80-1R5_-RC	1.5	M,N	10.0	8.00	7.70	11.50	11.00	1R5
PCFV80-2R2_-RC	2.2	M,N	11.5	7.40	6.90	9.80	9.20	2R2
PCFV80-3R3_-RC	3.3	M,N	15.0	6.60	6.20	8.00	7.50	3R3
PCFV80-4R7_-RC	4.7	L,M,N	19.5	5.80	5.30	6.70	6.00	4R7
PCFV80-5R6_-RC	5.6	L,M,N	22.0	5.40	5.20	6.20	5.80	5R6
PCFV80-6R8_-RC	6.8	L,M,N	25.0	5.10	5.00	5.60	5.10	6R8
PCFV80-100_-RC	10	K,L,M,N	33.0	4.60	4.20	5.00	4.30	100
PCFV80-150_-RC	15	K,L,M,N	50.0	3.60	3.20	4.00	3.60	150
PCFV80-220_-RC	22	K,L,M,N	73.0	2.90	2.45	3.10	2.80	220
PCFV80-330_-RC	33	K,L,M,N	100	2.30	2.10	2.60	2.10	330
PCFV80-470_-RC	47	K,L,M,N	135	2.00	1.70	2.20	1.90	470
PCFV80-560_-RC	56	K,L,M,N	160	1.75	1.60	1.90	1.60	560
PCFV80-680_-RC	68	K,L,M,N	205	1.65	1.50	1.75	1.50	680
PCFV80-820_-RC	82	K,L,M,N	230	1.40	1.30	1.60	1.40	820
PCFV80-101_-RC	100	K,L,M,N	300	1.20	1.10	1.45	1.20	101
PCFV80-121_-RC	120	K,L,M,N	350	1.10	1.00	1.30	1.10	121
PCFV80-151_-RC	150	K,L,M,N	410	0.98	0.90	1.20	1.03	151
PCFV80-181_-RC	180	K,L,M,N	490	0.91	0.93	1.04	0.94	181
PCFV80-221_-RC	220	K,L,M,N	610	0.85	0.76	0.99	0.90	221

\*Insert desired tolerance designator: K = ±10%, L = ±15%, M = ±20%, N = ±30%  
All specifications subject to change without notice.

## Reflow Solder Profile



Reflow times: 1 times max.

## 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  
**I<sub>sat</sub>:** Current at which the Inductance will drop by approximately 30% of its initial value.  
**I<sub>rms</sub>:** 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

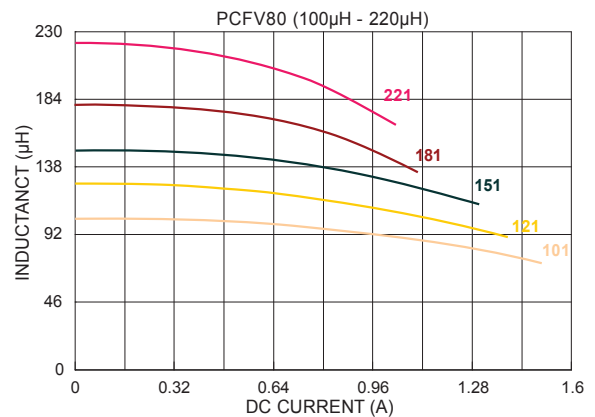
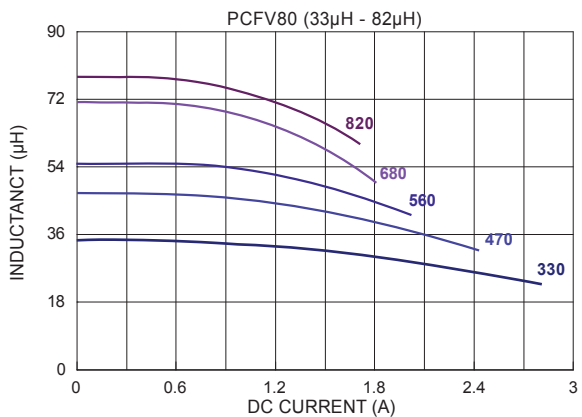
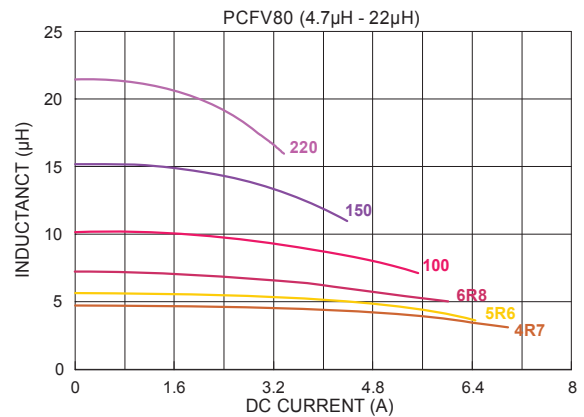
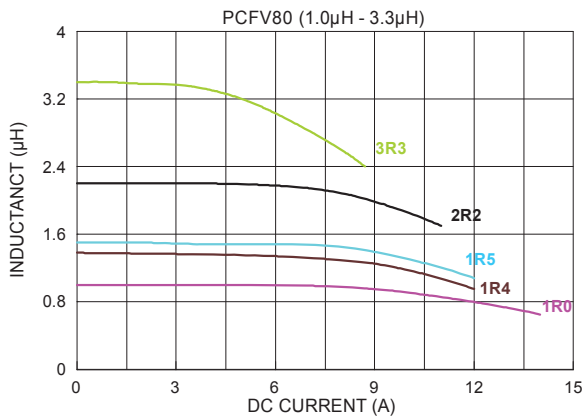
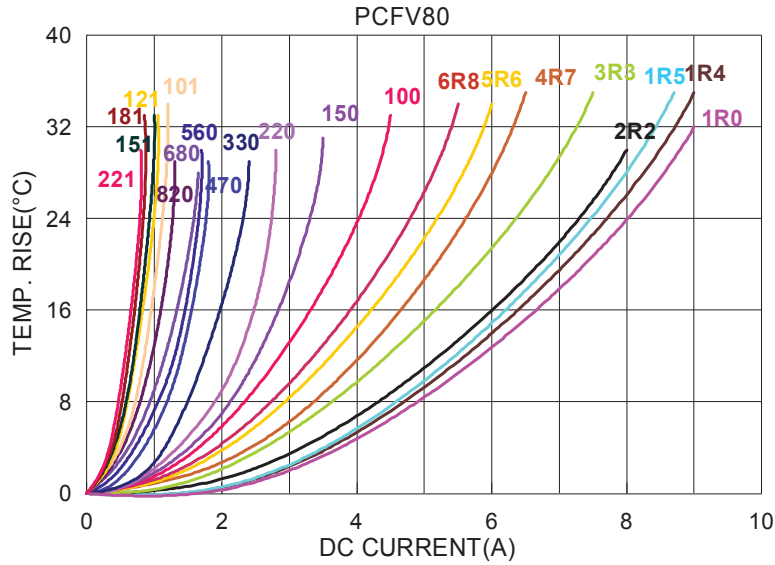
**(L):** HP4284A, CH11025, CH3302, CH1320, and CS1320S LCR Meter.  
**DCR:** CH16502, Agilent 33420A Micro-Ohm Meter.

## Physical

**Packaging:** 1000 per Tape and Reel  
**Marking:** EIA Inductance code



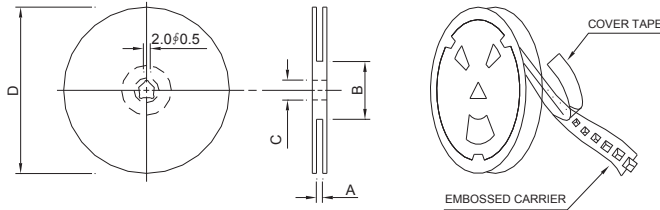
Typical Performance Curves





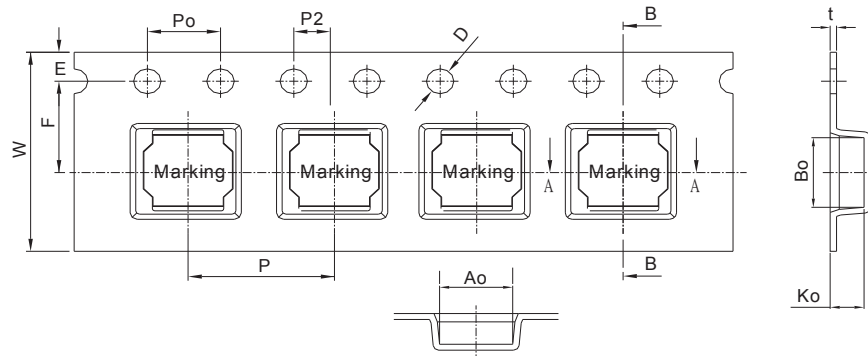
Packaging Information

(1) Reel Dimension



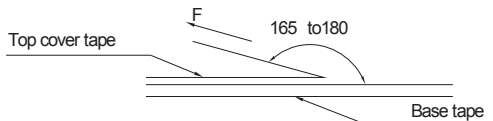
Type	A(mm)	B(mm)	C(mm)	D(mm)
330"x16mm	16.4+2/-0	80±	13+0.5/-0.2	330±3.0

(2) Tape Dimension



Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	w(mm)	t(mm)	Emm	F(mm)	D(mm)	Po(mm)	P2(mm)
8.4±0.1	8.4±0.1	4.3±0.1	12±0.1	16±0.3	0.4±0.1	1.75±0.1	7.5±0.1	1.5±0.1	4.0±0.1	2.00±0.1

(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 stadnard).

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

**Application Notice**

- Storage Conditions

To maintain the solderability of terminal electrodes:

1. PCFV80 products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40°C and 60% RH.
3. Recommended products should be used within 12 months form 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.