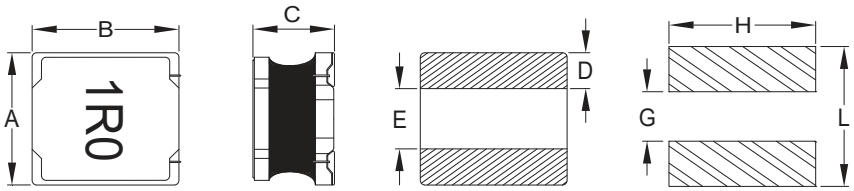
RoHS

SMD SEMI SHIELDED POWER CHIP INDUCTOR PCHP42NF

Dimensions: inch / (mm)



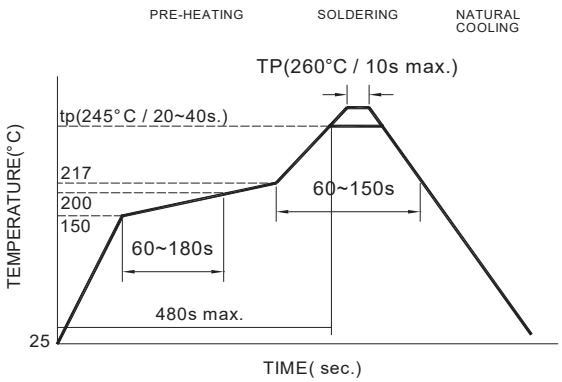
Recommended PCB Layout

A	B	C	D	E	G	H	L
.157±.008 (4.0±0.2)	.157±.008 (4.0±0.2)	.071 (1.8) Max	.059 (1.2) Ref	.063 (1.6) Ref	.055 (1.4)	.165 (4.2)	.165 (4.2)

Allied Part Number	Inductance (µH)	Tolerance (%)	Test Freq. (KHz) @ 1.0V	DCR (Ω) ±20%	Isat (A) Typ	Isat (A) Max	Irms (A) TYP	Irms (A) MAX
PCHP42NF-1R0N-RC	1.0	30	100	.027	4.00	3.60	3.70	3.60
PCHP42NF-1R5N-RC	1.5	30	100	.032	3.30	3.00	3.30	3.00
PCHP42NF-2R2M-RC	2.2	20	100	.042	3.00	2.70	2.90	2.70
PCHP42NF-3R3M-RC	3.3	20	100	.055	2.30	2.20	2.30	2.20
PCHP42NF-4R7M-RC	4.7	20	100	.070	2.00	1.90	2.00	1.90
PCHP42NF-6R8M-RC	6.8	20	100	.098	1.70	1.60	1.70	1.60
PCHP42NF-100M-RC	10	20	100	.150	1.50	1.40	1.50	1.40
PCHP42NF-150M-RC	15	20	100	.190	1.10	1.00	1.10	1.00
PCHP42NF-220M-RC	22	20	100	.290	0.90	0.80	0.90	0.80
PCHP42NF-330M-RC	33	20	100	.405	0.75	0.70	0.75	0.70
PCHP42NF-470M-RC	47	20	100	0.55	0.60	0.55	0.60	0.55
PCHP42NF-680M-RC	68	20	100	0.89	0.55	0.50	0.55	0.50
PCHP42NF-101M-RC	100	20	100	1.38	0.45	0.40	0.45	0.40
PCHP42NF-151M-RC	150	20	100	1.97	0.35	0.30	0.35	0.30
PCHP42NF-221M-RC	220	20	100	3.00	0.30	0.25	0.30	0.25

All specifications subject to change without notice.

Reflow Soldering



Features

- Semi Magnetically Shielded
- High Current
- Low DC Resistence

Electrical

Inductance Range: 1.0µH to 220µH
Tolerance: ±20% over entire range, ±30% for 1.0µH and 1.5µH values
Operating Temp: -40ºC to +125ºC
Isat: Current at which the Inductance will drop by no more then 30% of its initial value.
Irms: Based on a temp rise of ΔT = 40ºC typical above Ambient Temperature.

Solder Ability

Pre-Heat: 150ºC, 60 sec.
Solder Composition: Sn 96.5% / Ag3% / Cu0.5%
Temperature: 245±5°C
Flux for Lead Free: Rosin 9.5%
Dip Time: 4±1 sec.
Depth: completely cover terminals

Test Equipment

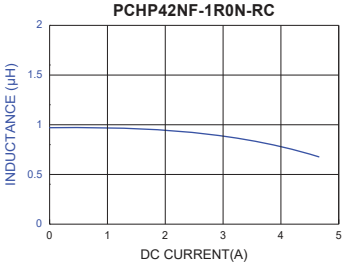
(L): HP4284A, CH11025, CH3302, CH1320, CH1320S LCR Meter
(DCR): CH16502, Agilent 33420A Micro-Ohm Meter

Physical

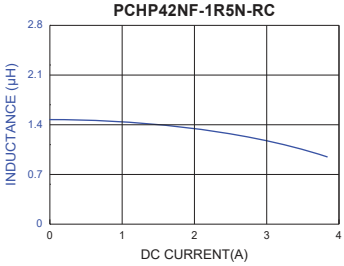
Packaging: 3500 per 13” Tape and reel
Marking: EIA Code

Typical Performance Curves

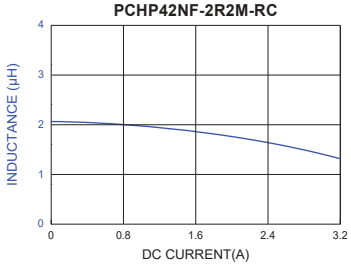
PCHP42NF-1R0N-RC



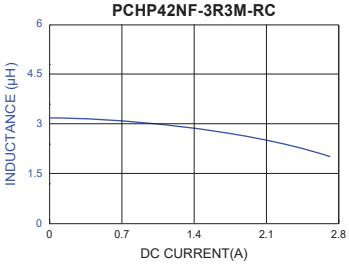
PCHP42NF-1R5N-RC



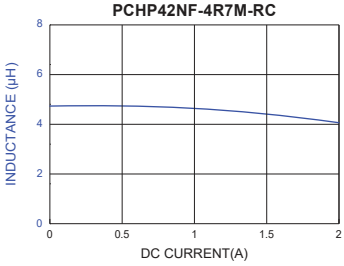
PCHP42NF-2R2M-RC



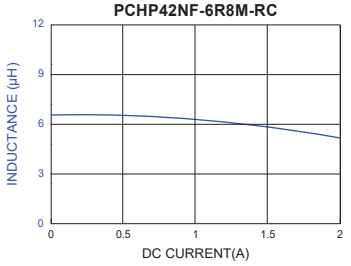
PCHP42NF-3R3M-RC



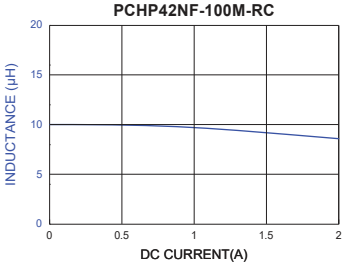
PCHP42NF-4R7M-RC



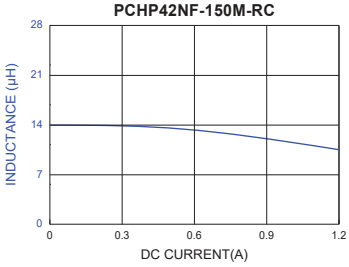
PCHP42NF-6R8M-RC



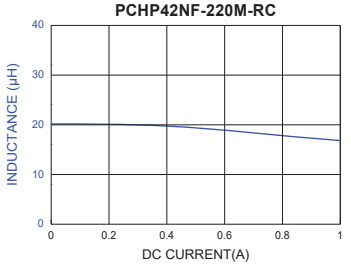
PCHP42NF-100M-RC



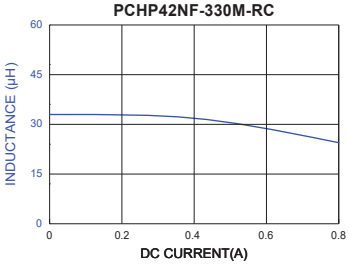
PCHP42NF-150M-RC



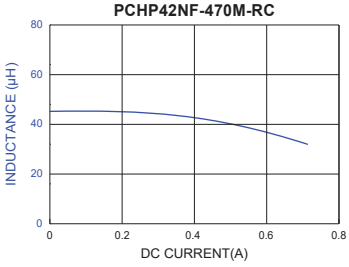
PCHP42NF-220M-RC



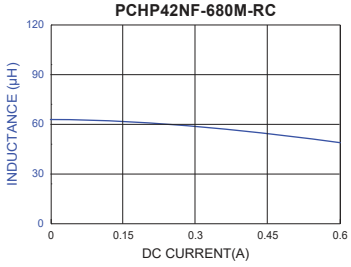
PCHP42NF-330M-RC



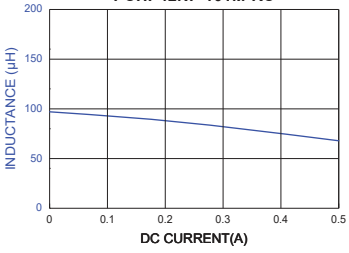
PCHP42NF-470M-RC



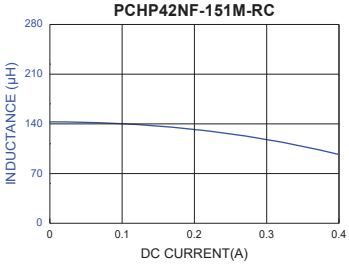
PCHP42NF-680M-RC



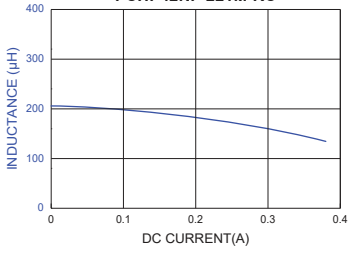
PCHP42NF-101M-RC



PCHP42NF-151M-RC



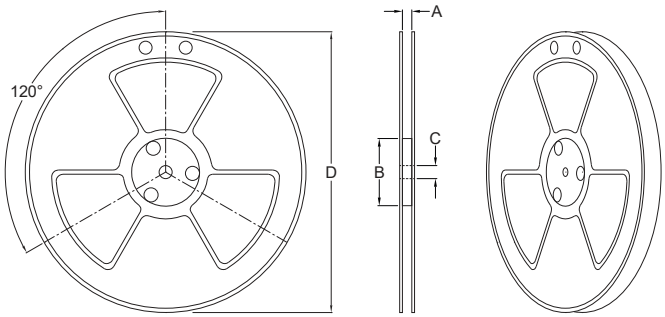
PCHP42NF-221M-RC



Packaging Information

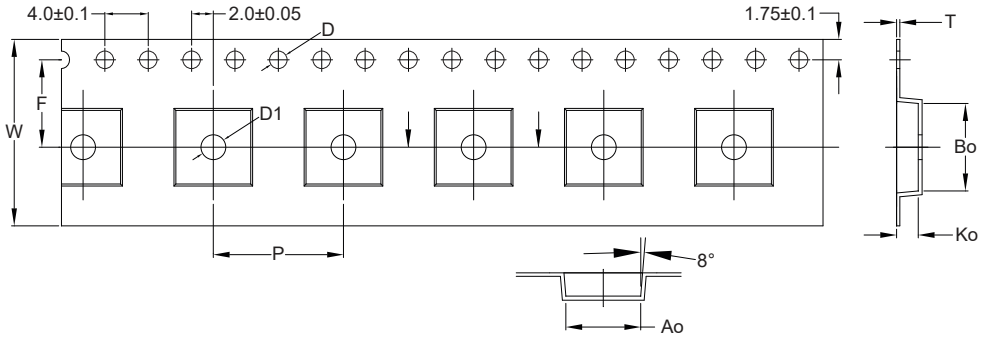
Dimensions: mm

Reel Dimension



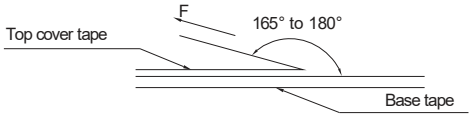
Type	A(mm)	B(mm)	C(mm)	D(mm)
330x12mm	12.0±1.5	100±0.5	13.2±0.5	330±0.5

Tape Dimension



Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	t(mm)	D(mm)	D1(mm)
4.35±0.1	4.50±0.1	1.90±0.1	8.0±0.1	12.0±0.3	5.5±0.1	0.25±0.05	1.5+0.1/-0.0	1.5±0.1

Tearing Off Force



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

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. PCHP42NF Series meets 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.