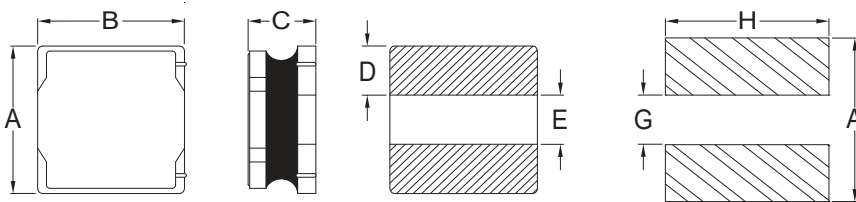




SMD SHIELDED POWER CHIP INDUCTOR

PCHP31

Dimensions: $\frac{\text{inch}}{\text{mm}}$



Recommended PCB Layout

A	B	C	D	E
.118±.008 (3.0±0.2)	.118±.008 (3.0±0.2)	.047 (1.2) Max	.039 (1.0) Ref	.039 (1.0) Ref

L	G	H
.126 (3.2)	.039 (1.0)	.126 (3.2)

*Allied Part Number	Inductance (μH)	Tolerance (%)	Test Freq. MHz, 0.1V	DCR (mΩ) ±20%	I _{rms} (A) Typ	I _{sat} (A) Typ
PCHP31-1R0N-RC	1.0	30	1	42.0	2.00	2.15
PCHP31-1R5N-RC	1.5	30	1	56.0	1.85	1.70
PCHP31-2R2M-RC	2.2	20	1	80.0	1.70	1.50
PCHP31-3R3M-RC	3.3	20	1	100	1.55	1.20
PCHP31-4R7M-RC	4.7	20	1	130	1.30	1.05
PCHP31-6R8M-RC	6.8	20	1	180	1.05	0.90
PCHP31-100M-RC	10	20	1	245	0.89	0.76
PCHP31-150M-RC	15	20	1	386	0.74	0.62
PCHP31-220M-RC	22	20	1	580	0.61	0.49

*All specifications subject to change without notice.

Features

- Magnetically Shielded Construction
- Low Profile
- Low DC Resistance
- MSL Level 1

Electrical

Inductance Range: 1.0μH - 22μH

Tolerance: 20% and 30%

Operating Temp: -40°C to +125°C

I_{sat}: DC current at which the inductance drops approximately 30% from its value without current.

I_{rms}: DC current that causes the temperature rise (ΔT = 40°C) from 25°C ambient.

Solderability

Pre-Heat: 150°C, 1Min

Solder Composition: Sn96.5%, AG3%, Cu0.5%

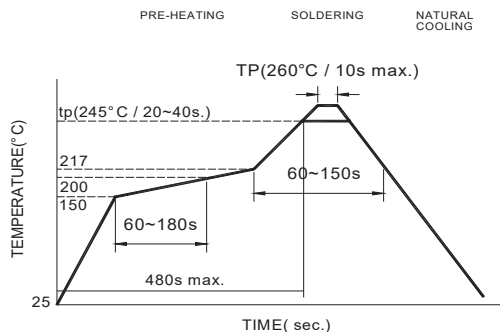
Temperature: 245±5°C

Flux for Lead Free: Rosin 9.5%

Dip Time: 4±1Sec

Depth: Completely cover the termination

Reflow Soldering



Reflow times: 3 times max.

Test Equipment

(L): HP4284A, CH11025, CH3302, CH1320, CH1320S LCR Meter

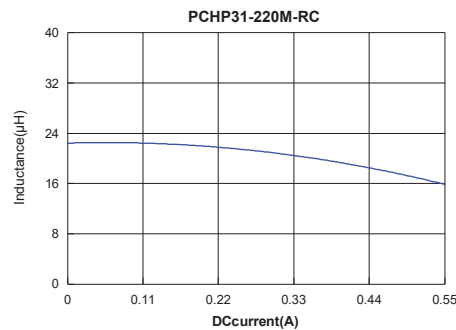
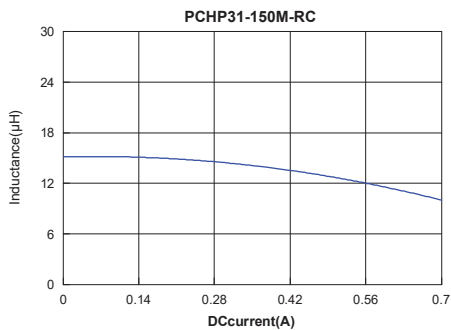
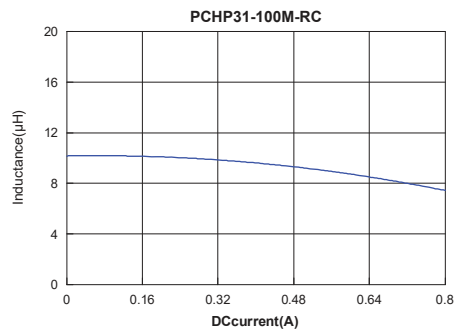
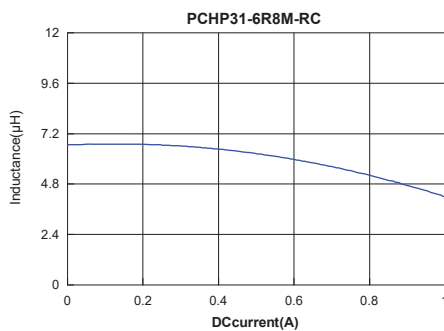
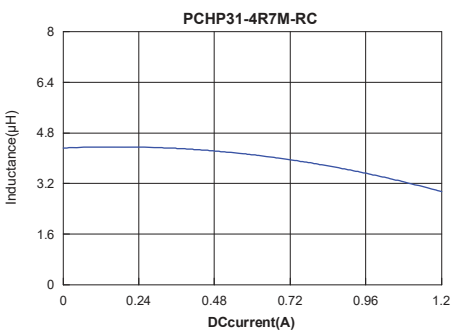
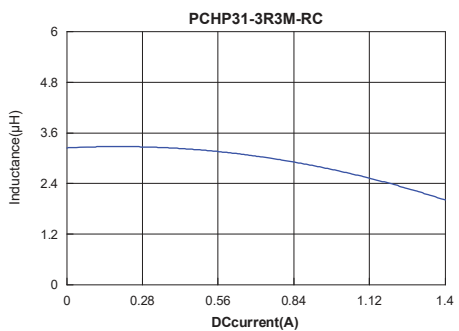
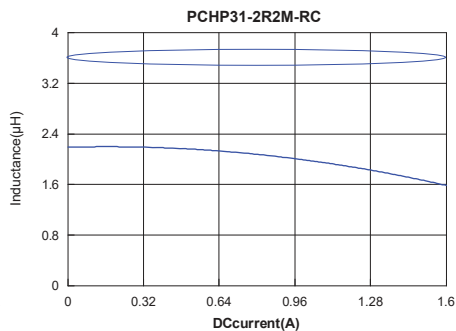
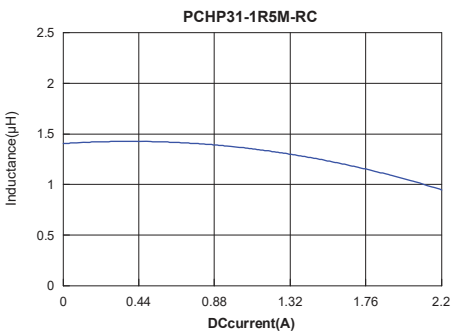
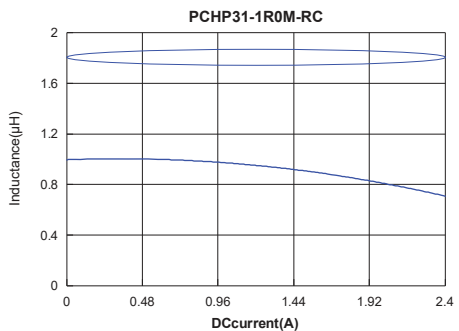
(DCR): CH16502, Agilent 33420A Micro-Ohm Meter

Physical

Packaging: 2000 per 7" Reel



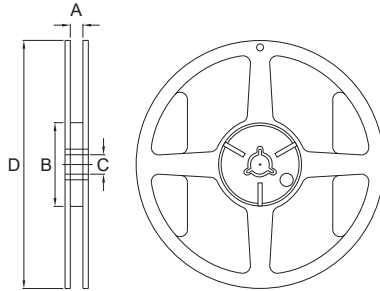
Typical Performance Curves





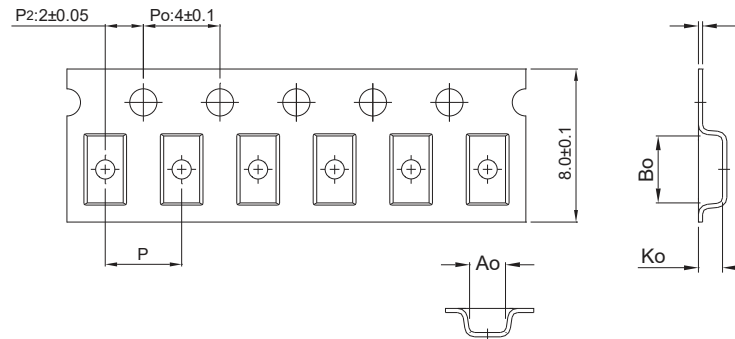
Packaging Information

Reel Dimension



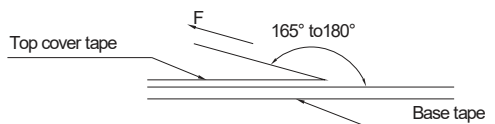
Type	A(mm)	B(mm)	C(mm)	D(mm)
177.8x8mm	8.4±1.0	50 min.	13±0.8	178±2

Tape Dimension



Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	t(mm)
3.2±0.05	3.2±0.05	1.40±0.2	4.0±0.05	0.23±0.05

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. PCHP31 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 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.