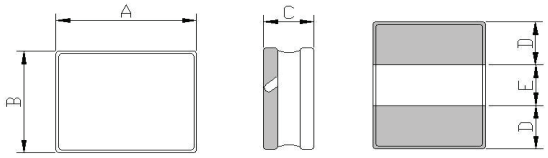
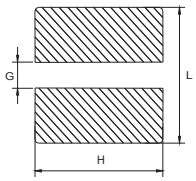
RoHS

SMD Shielded Power Inductor PAHP20

Dimensions: inch / (mm)

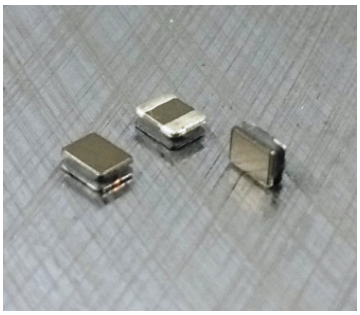




Recommended PCB Layout

A	B	C	D	E
.079-.004/+.008 (2.0 -0.1/+0.2)	.063-.004/+.008 (1.6 -0.1/+0.2)	.039 (1.0) Max	.019 (0.5) Ref	.039 (1.0) Ref

L	G	H
.091 (2.3)	.031 (0.8)	.039 (1.0)



Allied Part Number	Inductance (µH) 1MHz, 1.0V ±20%	DCR (Ω) Typ.	DCR (Ω) Max.	I sat (A) Typ.	I sat (A) Max.	I rms (A) Typ.	I rms (A) Max.
PAHP20-R24M	0.24	.015	.020	7.50	6.50	5.70* 6.50**	5.10* 5.50**
PAHP20-R33M	0.33	.018	.023	5.50	5.00	5.50* 5.60**	5.00* 5.20**
PAHP20-R47M	0.47	.024	.029	5.20	4.50	4.70* 5.30**	4.30* 4.70**
PAHP20-R68M	0.68	.036	.044	5.10	4.40	3.90* 4.20**	3.50* 3.80**
PAHP20-1R0M	1.0	.050	.060	4.50	4.00	3.20* 3.40**	2.90* 3.10**
PAHP20-1R5M	1.5	.068	.082	3.20	2.80	2.90* 3.10**	2.50* 2.70**
PAHP20-2R2M	2.2	.100	.120	2.70	2.40	2.20* 2.30**	2.00* 2.10**
PAHP20-4R7M	4.7	.180	.216	1.60	1.40	1.60* 1.80**	1.40* 1.60**

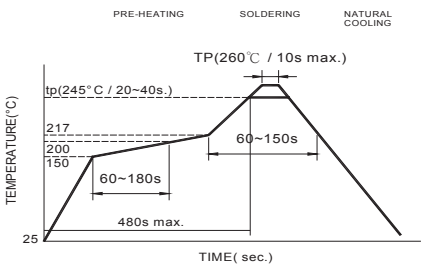
All specifications subject to change without notice.

Test Measurement PCB Data:

***Irms**
Material : FR4
Board Dimensions : 100 x 50 x 1.6t mm
Pattern dimensions : 45 x 30 mm (Double sided board)
Pattern thickness : 50µm

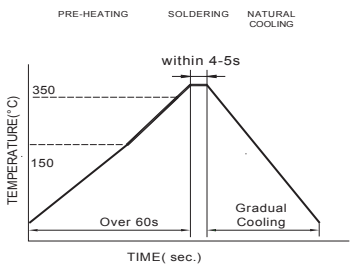
****Irms**
Material : FR4
Board Dimensions : 100 x 50 x 1.6t mm
Pattern dimensions : 45 x 45 mm (Double sided board)
Pattern thickness : 70µm

Reflow Soldering



Reflow times: 3 times max.

Iron Soldering



Reflow times: 1 time max.

Features

- Low Profile
- Magnetically Shielded Construction for power circuits using metallic magnetic material
- Compatible with high-density mounting
- RoHs Compliant and Halogen Free

Electrical

Inductance Range: .24µH to 4.7µH
Tolerance: 20% over entire range
Test Frequency: 1MHz
Operating Temp: -40°C to +125°C
MSL: Level 1
Isat: The Current at which the Inductance will drop by 30% typically.
Irms: The Curren at which the Coil temperature will rise by approximately 40°C without core loss.

Resistance to Soldering Heat

Pre-heating: 150ºC, 1min
Solder: 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

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

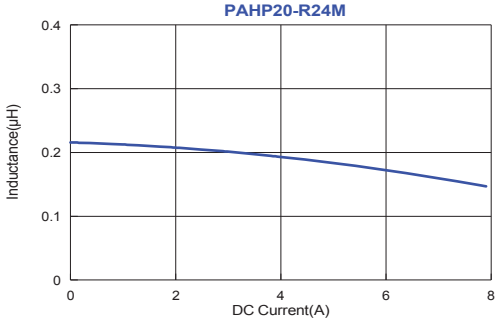
Physical

Packaging: 2000 pieces per 7 inch reel.

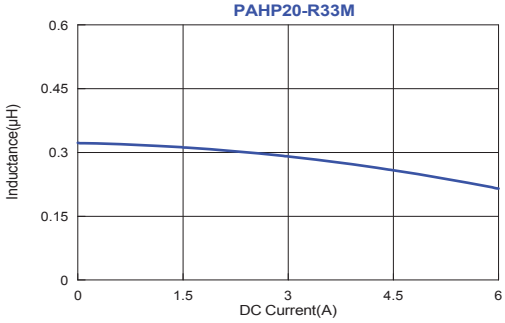
SMD ShieldedPower Inductor PAHP20

Typical Performance Curves

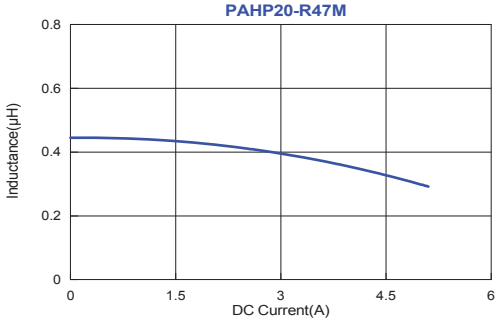
PAHP20-R24M



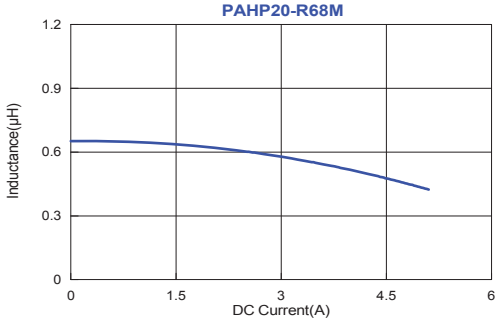
PAHP20-R33M



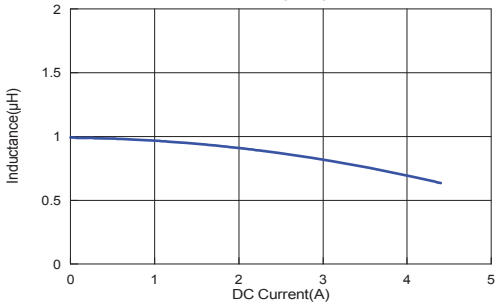
PAHP20-R47M



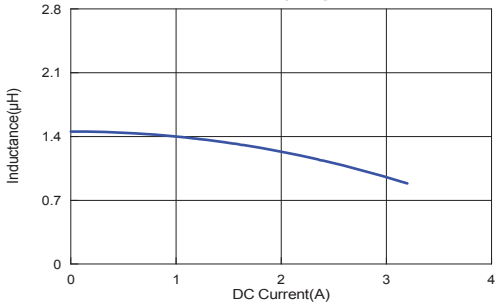
PAHP20-R68M



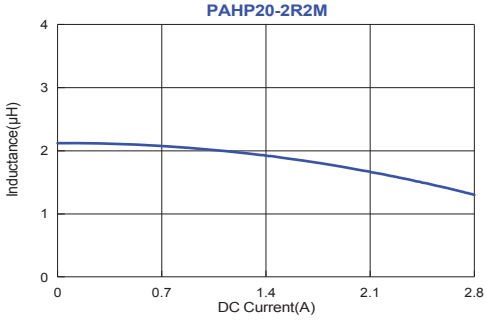
PAHP20-1R0M



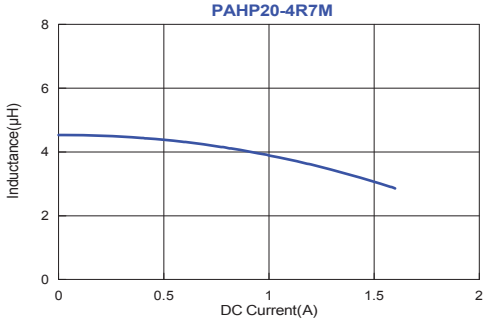
PAHP20-1R5M



PAHP20-2R2M

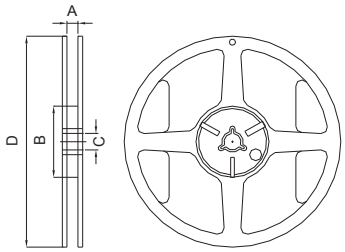


PAHP20-4R7M



Packaging Information

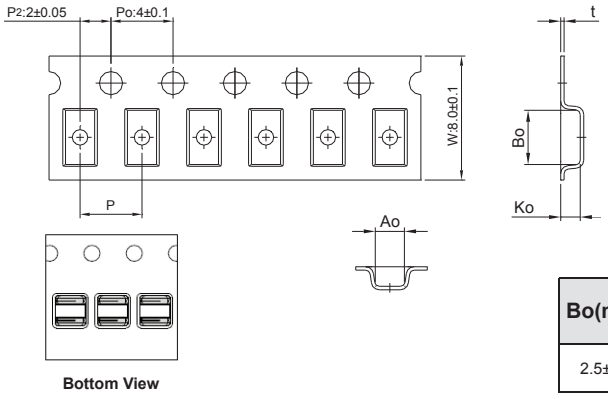
Reel Dimension



178x8mm

Type	A(mm)	B(mm)	C(mm)	D(mm)
178x8mm	8.4±1.0	50 Min	13±0.8	178±2.0

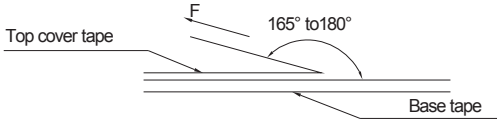
Tape Dimension



Bottom View

Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	t(mm)
2.5±0.1	2.0±0.1	1.4±0.1	4.0±0.1	.23±.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. (℃)	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. PAHP20 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.