

**SMD Power Inductor**

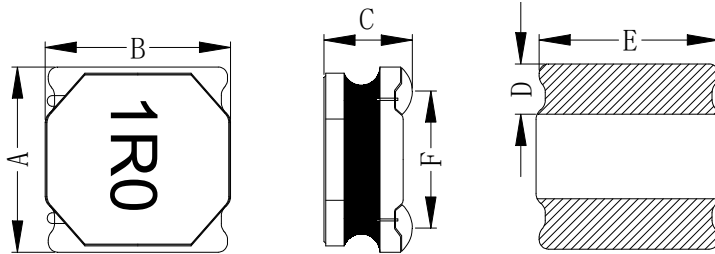
**HPC5020NF-SERIES**

**1. Features**

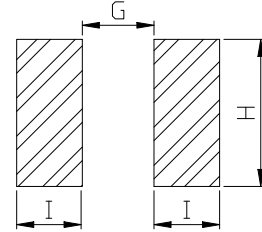
1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. Operating temperature :-40~+125°C (Including self - temperature rise).



**2. Dimension**



**Recommend Land pattern**



Series	*A(mm)	*B(mm)	*C(mm)	D(mm)	E(mm)	F(mm)
HPC5020NF	5.0±0.2	5.0±0.2	1.8±0.2	1.3±0.2	4.7±0.2	3.7ref

G(mm)	H(mm)	I(mm)
2.1	4.7	1.5

\*Dimensions are not including the termination. For maximum overall dimensions with termination , add 0.1mm.

Note: 1. The above PCB layout reference only.  
2. Recommend solder paste thickness at 0.12mm and above.

**3. Part Numbering**



- A: Series
- B: Dimension
- C: Type
- D: Inductance
- E: Inductance Tolerance

A/B\*C

1R0=1.00uH,100=10uH,101=100uH,102=1000uH  
M=±20%,Y=±30%.

marking direction cannot decide polarity. Color: Black, unidirectional.  
magnetic shielding

## 4. Specification

Part Number	Inductance L0 (uH) @ 0 A	Tolerance	Rated current		DCR (mΩ) @25°C ±20%.
			Temperature current I rms (A)	Saturation current I sat (A)	
HPC5020NF-1R0Y	1.00	±30%	4.10	5.00	20
HPC5020NF-1R2Y	1.20	±30%	3.80	4.80	20
HPC5020NF-1R5Y	1.50	±30%	3.50	4.50	25
HPC5020NF-2R2Y	2.20	±30%	3.30	4.10	32
HPC5020NF-2R2M	2.20	±20%	3.30	4.10	32
HPC5020NF-2R7M	2.70	±20%	3.00	3.80	38
HPC5020NF-2R9M	2.90	±20%	2.90	3.65	40
HPC5020NF-3R3M	3.30	±20%	2.80	3.50	43
HPC5020NF-4R7M	4.70	±20%	2.40	2.70	60
HPC5020NF-5R6M	5.60	±20%	2.10	2.40	69
HPC5020NF-6R8M	6.80	±20%	1.90	2.10	90
HPC5020NF-8R2M	8.20	±20%	1.75	1.90	98
HPC5020NF-100M	10.0	±20%	1.60	1.70	110
HPC5020NF-120M	12.0	±20%	1.40	1.40	135
HPC5020NF-150M	15.0	±20%	1.25	1.30	165
HPC5020NF-180M	18.0	±20%	1.17	1.20	190
HPC5020NF-220M	22.0	±20%	1.10	1.10	225
HPC5020NF-330M	33.0	±20%	0.80	0.80	335
HPC5020NF-470M	47.0	±20%	0.70	0.70	460

Note:

1. All test data referenced to 25°C ambient , Ls:100KHz/1V.
2. Testing Instrument(or equ) : L: HP4284A,CH11025,CH3302,CH1320,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMMETER.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately ΔT of 40°C
4. Saturation Current (Isat) will cause L0 to drop approximately 30%.
5. Rated DC Current : The less value which is I rms or Isat.
6. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.Circuit design,component,PCB trace size and thickness,airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
7. Special inquiries besides the above common used types can be met on your requirement.

### 5. Typical Performance Curves

