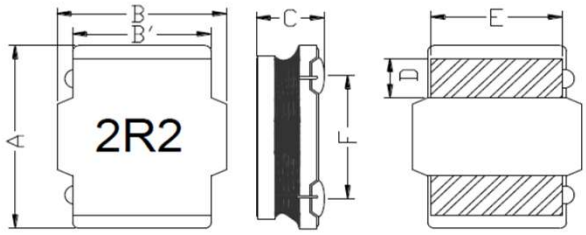
SMD Power Inductor

HPC8040NF-SERIES

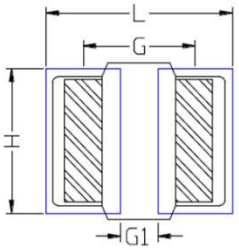
1. Features

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

2. Dimension



Recommendend Land pattern



Series	Inductance	A(mm)	B(mm)	B'(mm)	C(mm)	D(mm)	E(mm)	F(mm)
HPC8040NF	＜10uH	8.0±0.3	8.0±0.3	6.3±0.2	4.2Max	2.0±0.3	6.0±0.3	5.5±0.3
	⩾10uH				3.7±0.3			

L(mm)	G(mm)	H(mm)	G1(mm)
8.5	5.5	6.3	2.5

Note: 1. The above PCB layout reference only.
2. Recommend solder paste thickness at 0.15mm and above.

3. Part Numbering

HPC	8040	NF	-	2R2	M
A	B	C		D	E

A: Series
B: Dimension A/B*C
C: Type
D: Inductance 2R2=2.20uH,100=10uH,101=100uH,102=1000uH
E: Inductance Tolerance K=±10%,M=±20%,Y=±30%.

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

4. Specification

Part Number	Inductance L0 (uH) @ 0 A	Tolerance				Frequency	Rated current				DCR (mΩ) @25℃ ±20%.
							Tempetature current I rms (A)		Saturation current I sat (A)		
		K	L	M	Y		Typ	Max	Typ	Max	
HPC8040NF-1R0	1.00	/	/	±20%	±30%	1MHz/1V	8.50	8.00	13.80	13.00	8.2
HPC8040NF-1R2	1.20	/	/	±20%	±30%	1MHz/1V	8.30	7.80	12.80	11.50	8.2
HPC8040NF-1R4	1.40	/	/	±20%	±30%	1MHz/1V	8.20	7.80	11.80	11.20	10.0
HPC8040NF-1R5	1.50	/	/	±20%	±30%	1MHz/1V	8.00	7.70	11.50	11.00	10.0
HPC8040NF-1R6	1.60	/	/	±20%	±30%	1MHz/1V	8.00	7.70	11.50	11.00	10.0
HPC8040NF-2R0	2.0	/	/	±20%	±30%	1MHz/1V	7.50	7.10	10.20	9.60	11.0
HPC8040NF-2R2	2.20	/	/	±20%	±30%	1MHz/1V	7.40	6.90	9.80	9.20	11.5
HPC8040NF-2R7	2.70	/	/	±20%	±30%	1MHz/1V	7.00	6.50	9.00	8.20	13.0
HPC8040NF-3R3	3.30	/	/	±20%	±30%	1MHz/1V	6.60	6.20	8.00	7.50	15.0
HPC8040NF-4R7	4.70	/	±15%	±20%	±30%	1MHz/1V	5.80	5.30	6.70	6.00	19.5
HPC8040NF-5R6	5.60	/	±15%	±20%	±30%	1MHz/1V	5.40	5.20	6.20	5.80	22.0
HPC8040NF-6R8	6.80	/	±15%	±20%	±30%	1MHz/1V	5.10	5.00	5.60	5.10	25.0
HPC8040NF-8R2	8.20	/	±15%	±20%	±30%	1MHz/1V	4.80	4.50	5.30	4.60	30.0
HPC8040NF-100	10.0	±10%	±15%	±20%	±30%	1MHz/1V	4.60	4.20	5.00	4.30	33.0
HPC8040NF-150	15.0	±10%	±15%	±20%	±30%	1MHz/1V	3.60	3.20	4.00	3.60	50.0
HPC8040NF-220	22.0	±10%	±15%	±20%	±30%	1MHz/1V	2.90	2.45	3.10	2.80	73.0
HPC8040NF-330	33.0	±10%	±15%	±20%	±30%	1MHz/1V	2.30	2.10	2.60	2.10	100
HPC8040NF-470	47.0	±10%	±15%	±20%	±30%	1MHz/1V	2.00	1.70	2.20	1.90	135
HPC8040NF-560	56.0	±10%	±15%	±20%	±30%	1MHz/1V	1.75	1.60	1.90	1.60	160
HPC8040NF-680	68.0	±10%	±15%	±20%	±30%	1MHz/1V	1.65	1.50	1.75	1.50	205
HPC8040NF-820	82.0	±10%	±15%	±20%	±30%	1MHz/1V	1.40	1.30	1.60	1.40	230
HPC8040NF-101	100	±10%	±15%	±20%	±30%	1MHz/1V	1.20	1.10	1.45	1.20	300
HPC8040NF-121	120	±10%	±15%	±20%	±30%	1MHz/1V	1.10	1.00	1.30	1.10	350
HPC8040NF-151	150	±10%	±15%	±20%	±30%	1MHz/1V	0.98	0.90	1.20	1.03	410
HPC8040NF-181	180	±10%	±15%	±20%	±30%	1MHz/1V	0.91	0.83	1.04	0.94	490
HPC8040NF-221	220	±10%	±15%	±20%	±30%	1MHz/1V	0.85	0.76	0.99	0.90	610
HPC8040NF-331	330	±10%	±15%	±20%	±30%	100KHz/1V	0.70	0.66	0.75	0.70	850
HPC8040NF-471	470	±10%	±15%	±20%	±30%	100KHz/1V	0.63	0.58	0.60	0.55	1300

Note:

1. All test data referenced to 25℃ ambient .
2. Testing Instrument : HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH502BC MICRO OHMMETER.
3. Heat Rated Current (Irms) will cause the coil temperature rise approximately Δt of 40℃.
4. Saturation Current (Isat) will cause L0 to drop approximately 30%.
5. The part temperature (ambient + temp rise) should not exceed 125℃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.
6. Special inquiries besides the above common used types can be met on your requirement.

9. Typical Performance Curves