

**SMD Power Inductor**

**HPC8040NV-SRIES**

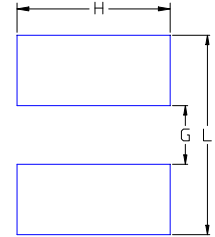
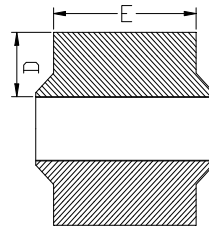
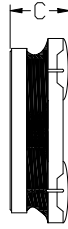
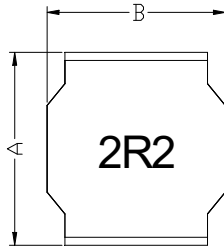
**1. Features**

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. High reliability -Reliability tests comply with AEC-Q200.
4. Operating temperature : -55~+125°C (Including self - temperature rise).



**Recommendend Land pattern**

**2. Dimension**

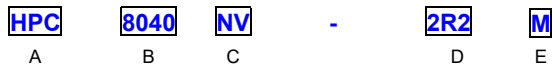


Series	Inductance	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
HPC8040NV	<10uH	8.0±0.3	8.0±0.3	4.2Max	2.4±0.3	6.3±0.3
	≥10uH			3.7±0.3		

L(mm)	G(mm)	H(mm)
8.5	2.8	6.6

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

**3. Part Numbering**



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

A/B\*C  
 V=Vehicle  
 2R2=2.20uH  
 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°C ±20%.
		K	L	M	Y		Tempetature current I rms (A)	Saturation current I sat (A)	
HPC8040NV-R50	0.50	/	/	±20%	±30%	1MHz/1V	12.00	17.00	5.5
HPC8040NV-1R0	1.00	/	/	±20%	±30%	1MHz/1V	8.50	13.80	8.2
HPC8040NV-1R4	1.40	/	/	±20%	±30%	1MHz/1V	8.20	11.80	10.0
HPC8040NV-1R5	1.50	/	/	±20%	±30%	1MHz/1V	8.00	11.50	10.0
HPC8040NV-2R2	2.20	/	/	±20%	±30%	1MHz/1V	7.40	9.80	11.5
HPC8040NV-3R3	3.30	/	/	±20%	±30%	1MHz/1V	6.60	8.00	15.0
HPC8040NV-3R6	3.60	/	/	±20%	±30%	1MHz/1V	6.40	7.60	15.0
HPC8040NV-4R7	4.70	/	±15%	±20%	±30%	1MHz/1V	5.80	6.70	19.5
HPC8040NV-5R6	5.60	/	±15%	±20%	±30%	1MHz/1V	5.40	6.20	22.0
HPC8040NV-6R8	6.80	/	±15%	±20%	±30%	1MHz/1V	5.10	5.60	25.0
HPC8040NV-100	10.0	±10%	±15%	±20%	±30%	1MHz/1V	4.60	5.00	33.0
HPC8040NV-150	15.0	±10%	±15%	±20%	±30%	1MHz/1V	3.60	4.00	50.0
HPC8040NV-220	22.0	±10%	±15%	±20%	±30%	1MHz/1V	2.90	3.10	73.0
HPC8040NV-330	33.0	±10%	±15%	±20%	±30%	1MHz/1V	2.30	2.60	100
HPC8040NV-470	47.0	±10%	±15%	±20%	±30%	1MHz/1V	2.00	2.20	135
HPC8040NV-560	56.0	±10%	±15%	±20%	±30%	1MHz/1V	1.75	1.90	160
HPC8040NV-680	68.0	±10%	±15%	±20%	±30%	1MHz/1V	1.65	1.75	205
HPC8040NV-820	82.0	±10%	±15%	±20%	±30%	1MHz/1V	1.40	1.60	230
HPC8040NV-101	100	±10%	±15%	±20%	±30%	1MHz/1V	1.20	1.45	300
HPC8040NV-121	120	±10%	±15%	±20%	±30%	1MHz/1V	1.10	1.30	350
HPC8040NV-151	150	±10%	±15%	±20%	±30%	1MHz/1V	0.98	1.20	410
HPC8040NV-181	180	±10%	±15%	±20%	±30%	1MHz/1V	0.91	1.04	490
HPC8040NV-221	220	±10%	±15%	±20%	±30%	1MHz/1V	0.85	0.99	610
HPC8040NV-331	330	±10%	±15%	±20%	±30%	100KHz/1V	0.70	0.75	850
HPC8040NV-471	470	±10%	±15%	±20%	±30%	100KHz/1V	0.63	0.60	1300

Note:

- All test data referenced to 25°C ambient ,
- Testing Instrument : HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH502BC MICRO OHMMETER.
- Heat Rated Current (I rms) will cause the coil temperature rise approximately ΔT of 40°C
- Saturation Current (Isat) will cause L0 to drop approximately 30%.
- Rated DC Current : The less value whith is I rms or Isat.
- 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.
- Special inquiries besides the above common used types can be met on your requirement.

### 5. Typical Performance Curves

