

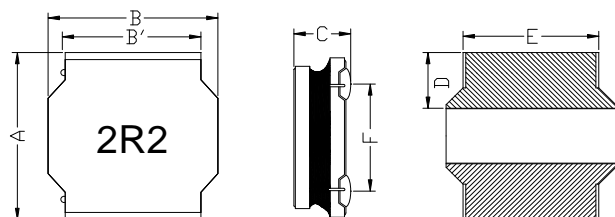
**SMD Power Inductor** **HPC8040NV-Series-Z01**

**1. Features**

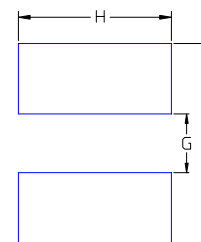
1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. High reliability -Reliability test meet AEC-Q200.
4. Operating temperature: -55~+125°C (Including self-temperature rise)



**2. Dimensions**



**Recommended Land pattern**



Series	Inductance	A(mm)	B(mm)	B'(mm)	C(mm)	D(mm)	E(mm)	F(mm)
HPC8040NV	≤10uH	8.0±0.3	8.0±0.3	6.3±0.2	3.9±0.3	2.0±0.3	6.0±0.3	5.5±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
  - F: Code
- A/B\*C
  - V: Vehicle
  - 2R2=2.20uH
  - M=±20%.
  - 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%.
		K	L	M	Y		Temperature current I rms (A)		Saturation current I sat (A)		
							Typ	Max	Typ	Max	
HPC8040NV-1R0□-Z01	1.00	/	/	±20%	±30%	1MHz/1V	8.50	8.00	13.80	13.00	8.2
HPC8040NV-1R2□-Z01	1.20	/	/	±20%	±30%	1MHz/1V	8.30	7.80	12.80	11.50	8.2
HPC8040NV-1R4□-Z01	1.40	/	/	±20%	±30%	1MHz/1V	8.20	7.80	11.80	11.20	10.0
HPC8040NV-1R5□-Z01	1.50	/	/	±20%	±30%	1MHz/1V	8.00	7.70	11.50	11.00	10.0
HPC8040NV-1R6□-Z01	1.60	/	/	±20%	±30%	1MHz/1V	8.00	7.70	11.50	11.00	10.0
HPC8040NV-2R0□-Z01	2.0	/	/	±20%	±30%	1MHz/1V	7.50	7.10	10.20	9.60	11.0
HPC8040NV-2R2□-Z01	2.20	/	/	±20%	±30%	1MHz/1V	7.40	6.90	9.80	9.20	11.5
HPC8040NV-2R7□-Z01	2.70	/	/	±20%	±30%	1MHz/1V	7.00	6.50	9.00	8.20	13.0
HPC8040NV-3R3□-Z01	3.30	/	/	±20%	±30%	1MHz/1V	6.60	6.20	8.00	7.50	15.0
HPC8040NV-4R7□-Z01	4.70	/	±15%	±20%	±30%	1MHz/1V	5.80	5.30	6.70	6.00	19.5
HPC8040NV-5R6□-Z01	5.60	/	±15%	±20%	±30%	1MHz/1V	5.40	5.20	6.20	5.80	22.0
HPC8040NV-6R8□-Z01	6.80	/	±15%	±20%	±30%	1MHz/1V	5.10	5.00	5.60	5.10	25.0
HPC8040NV-8R2□-Z01	8.20	/	±15%	±20%	±30%	1MHz/1V	4.80	4.50	5.30	4.60	30.0
HPC8040NV-100□-Z01	10.0	±10%	±15%	±20%	±30%	1MHz/1V	4.60	4.20	5.00	4.30	33.0
HPC8040NV-150□-Z01	15.0	±10%	±15%	±20%	±30%	1MHz/1V	3.60	3.20	4.00	3.60	50.0
HPC8040NV-220□-Z01	22.0	±10%	±15%	±20%	±30%	1MHz/1V	2.90	2.45	3.10	2.80	73.0
HPC8040NV-330□-Z01	33.0	±10%	±15%	±20%	±30%	1MHz/1V	2.30	2.10	2.60	2.10	100
HPC8040NV-470□-Z01	47.0	±10%	±15%	±20%	±30%	1MHz/1V	2.00	1.70	2.20	1.90	135
HPC8040NV-560□-Z01	56.0	±10%	±15%	±20%	±30%	1MHz/1V	1.75	1.60	1.90	1.60	160
HPC8040NV-680□-Z01	68.0	±10%	±15%	±20%	±30%	1MHz/1V	1.65	1.50	1.75	1.50	205
HPC8040NV-820□-Z01	82.0	±10%	±15%	±20%	±30%	1MHz/1V	1.40	1.30	1.60	1.40	230
HPC8040NV-101□-Z01	100	±10%	±15%	±20%	±30%	1MHz/1V	1.20	1.10	1.45	1.20	300
HPC8040NV-121□-Z01	120	±10%	±15%	±20%	±30%	1MHz/1V	1.10	1.00	1.30	1.10	350
HPC8040NV-151□-Z01	150	±10%	±15%	±20%	±30%	1MHz/1V	0.98	0.90	1.20	1.03	410
HPC8040NV-181□-Z01	180	±10%	±15%	±20%	±30%	1MHz/1V	0.91	0.83	1.04	0.94	490
HPC8040NV-221□-Z01	220	±10%	±15%	±20%	±30%	1MHz/1V	0.85	0.76	0.99	0.90	610
HPC8040NV-331□-Z01	330	±10%	±15%	±20%	±30%	100KHz/1V	0.70	0.66	0.75	0.70	850
HPC8040NV-471□-Z01	470	±10%	±15%	±20%	±30%	100KHz/1V	0.63	0.58	0.60	0.55	1300

Note:

- All test data referenced to 25℃ 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℃.
- Saturation Current (Isat) will cause L0 to drop approximately 30%.
- 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.
- Special inquiries besides the above common used types can be met on your requirement.

### 5. Typical Performance Curves

