

# SMD Power Inductor

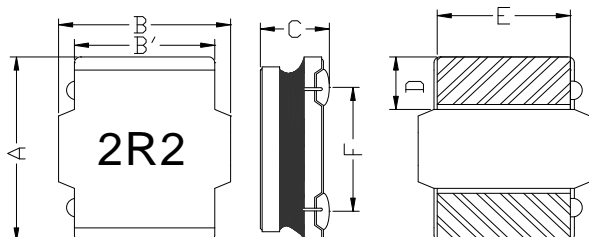
HPC6045NV-Series

## 1. Features

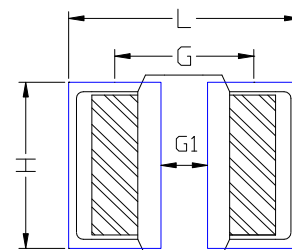
1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. High reliability -Reliability test complied to AEC-Q200



## 2. Dimension



### Recommended Land pattern



Series	A(mm)	B(mm)	B'(mm)	C(mm)	D(mm)	E(mm)	F(mm)
HPC6045NV	6.0±0.3	6.0±0.3	4.8±0.2	4.2±0.3	1.7±0.3	4.5±0.3	4.25±0.3

L(mm)	G(mm)	G1(mm)	H(mm)
6.5	4.25	1.80min	4.8

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 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)		
		K	L	M	Y	Typ	Max	Typ	Max	
HPC6045NV-R36	0.36	/	/	±20%	±30%	9.00	8.50	18.00	16.50	4.80
HPC6045NV-R47	0.47	/	/	±20%	±30%	8.60	8.00	17.00	16.00	6.80
HPC6045NV-R82	0.82	/	/	±20%	±30%	8.20	7.50	14.50	13.50	8.50
HPC6045NV-1R0	1.00	/	/	±20%	±30%	8.00	7.30	13.50	12.50	10.0
HPC6045NV-1R2	1.20	/	/	±20%	±30%	7.50	7.00	12.50	11.50	10.5
HPC6045NV-1R3	1.30	/	/	±20%	±30%	7.50	7.00	12.50	11.50	10.5
HPC6045NV-1R5	1.50	/	/	±20%	±30%	7.00	6.60	12.00	11.00	11.7
HPC6045NV-1R8	1.80	/	/	±20%	±30%	6.80	6.20	11.00	10.00	12.0
HPC6045NV-2R0	2.00	/	/	±20%	±30%	6.50	5.80	10.50	9.50	13.5
HPC6045NV-2R2	2.20	/	/	±20%	±30%	6.00	5.30	9.50	8.55	15.0
HPC6045NV-2R3	2.30	/	/	±20%	±30%	5.80	5.00	9.30	8.20	16.0
HPC6045NV-3R0	3.00	/	/	±20%	±30%	5.20	4.60	8.00	7.50	20.0
HPC6045NV-3R3	3.30	/	/	±20%	±30%	5.00	4.50	7.80	7.30	21.0
HPC6045NV-3R6	3.60	/	/	±20%	±30%	4.90	4.30	7.40	6.90	22.5
HPC6045NV-4R7	4.70	/	±15%	±20%	±30%	4.50	4.00	6.80	6.20	26.0
HPC6045NV-5R6	5.60	/	±15%	±20%	±30%	4.10	3.70	6.40	5.70	31.0
HPC6045NV-6R3	6.30	/	±15%	±20%	±30%	3.80	3.50	5.90	5.30	33.0
HPC6045NV-6R8	6.80	/	±15%	±20%	±30%	3.60	3.30	5.70	5.15	34.0
HPC6045NV-8R2	8.20	/	±15%	±20%	±30%	3.40	2.90	5.10	4.50	46.0
HPC6045NV-100	10.0	±10%	±15%	±20%	±30%	3.20	2.60	4.60	4.20	52.0
HPC6045NV-150	15.0	±10%	±15%	±20%	±30%	2.80	2.20	3.80	3.30	71.0
HPC6045NV-180	18.0	±10%	±15%	±20%	±30%	2.60	2.10	3.40	2.90	80.0
HPC6045NV-220	22.0	±10%	±15%	±20%	±30%	2.30	1.90	3.30	2.70	96.0
HPC6045NV-330	33.0	±10%	±15%	±20%	±30%	1.80	1.50	2.50	2.10	145
HPC6045NV-470	47.0	±10%	±15%	±20%	±30%	1.60	1.20	2.00	1.75	200
HPC6045NV-560	56.0	±10%	±15%	±20%	±30%	1.40	1.00	1.80	1.65	230
HPC6045NV-680	68.0	±10%	±15%	±20%	±30%	1.10	0.92	1.60	1.52	305
HPC6045NV-820	82.0	±10%	±15%	±20%	±30%	0.98	0.88	1.50	1.40	365
HPC6045NV-101	100	±10%	±15%	±20%	±30%	0.92	0.82	1.33	1.25	456
HPC6045NV-121	120	±10%	±15%	±20%	±30%	0.85	0.79	1.20	1.10	500
HPC6045NV-151	150	±10%	±15%	±20%	±30%	0.75	0.70	1.10	1.00	626
HPC6045NV-181	180	±10%	±15%	±20%	±30%	0.68	0.60	1.00	0.90	745
HPC6045NV-221	220	±10%	±15%	±20%	±30%	0.60	0.50	0.88	0.77	900
HPC6045NV-331	330	±10%	±15%	±20%	±30%	0.55	0.45	0.60	0.55	1400
HPC6045NV-471	470	±10%	±15%	±20%	±30%	0.40	0.35	0.50	0.45	2050

### Note:

- All test data referenced to 25°C ambient, Ls/Q:1MHz/1V.
- 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%
- 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.

