

SMD Power Inductor

1. Features

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

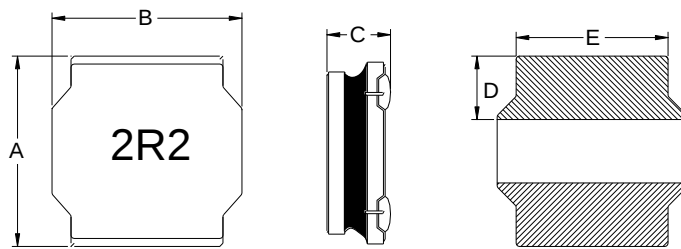


2. Applications

For automotive applications.

AEC-Q200

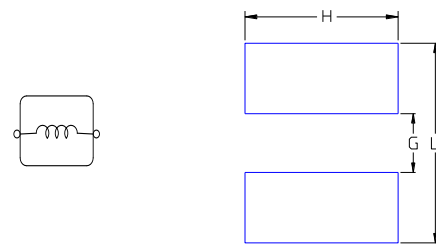
3. Dimension



A	B	C	D	E
6.0±0.3	6.0±0.3	4.2±0.3	1.9±0.3	4.8±0.3

Unit:mm

Recommend Land pattern



L	G	H
6.5	2.2	6.5

Note:

1. PCB layout is referred to IPC-7351B standard
2. The above PCB layout is for reference only.

4. Part Numbering

THPC	6045	NV	-	2R2	M
A	B	C		D	E

A: Series

B: Dimension

C: Type

D: Inductance

E: Inductance Tolerance

A/B*C

V=Vehicle

2R2=2.20uH

M=±20%

Anti-static packaging

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

5. Specification

Part Number	Inductance (uH) $\pm 20\%$ @ 0 A DC	I rms (A)		I sat (A)		DCR (m Ω) $\pm 20\%$
		Typ	Max	Typ	Max	
THPC6045NV-R36M	0.36	9.00	8.50	18.00	16.50	4.80
THPC6045NV-R47M	0.47	8.60	8.00	17.00	16.00	6.80
THPC6045NV-R82M	0.82	8.20	7.50	14.50	13.50	8.50
THPC6045NV-1R0M	1.00	8.00	7.30	13.50	12.50	10.0
THPC6045NV-1R2M	1.20	7.50	7.00	12.50	11.50	10.5
THPC6045NV-1R3M	1.30	7.50	7.00	12.50	11.50	10.5
THPC6045NV-1R5M	1.50	7.00	6.60	12.00	11.00	11.7
THPC6045NV-1R8M	1.80	6.80	6.20	11.00	10.00	12.0
THPC6045NV-2R0M	2.00	6.50	5.80	10.50	9.50	13.5
THPC6045NV-2R2M	2.20	6.00	5.30	9.50	8.55	15.0
THPC6045NV-2R3M	2.30	5.80	5.00	9.30	8.20	16.0
THPC6045NV-3R0M	3.00	5.20	4.60	8.00	7.50	20.0
THPC6045NV-3R3M	3.30	5.00	4.50	7.80	7.30	21.0
THPC6045NV-3R6M	3.60	4.90	4.30	7.40	6.90	22.5
THPC6045NV-4R7M	4.70	4.50	4.00	6.80	6.20	26.0
THPC6045NV-5R6M	5.60	4.10	3.70	6.40	5.70	31.0
THPC6045NV-6R3M	6.30	3.80	3.50	5.90	5.30	33.0
THPC6045NV-6R8M	6.80	3.60	3.30	5.70	5.15	34.0
THPC6045NV-8R2M	8.20	3.40	2.90	5.10	4.50	46.0
THPC6045NV-100M	10.0	3.20	2.60	4.60	4.20	52.0
THPC6045NV-150M	15.0	2.80	2.20	3.80	3.30	71.0
THPC6045NV-180M	18.0	2.60	2.10	3.40	2.90	80.0
THPC6045NV-220M	22.0	2.30	1.90	3.30	2.70	96.0
THPC6045NV-330M	33.0	1.80	1.50	2.50	2.10	145
THPC6045NV-470M	47.0	1.60	1.20	2.00	1.75	200
THPC6045NV-560M	56.0	1.40	1.00	1.80	1.65	230
THPC6045NV-680M	68.0	1.10	0.92	1.60	1.52	305
THPC6045NV-820M	82.0	0.98	0.88	1.50	1.40	365
THPC6045NV-101M	100	0.92	0.82	1.33	1.25	456
THPC6045NV-121M	120	0.85	0.79	1.20	1.10	500
THPC6045NV-151M	150	0.75	0.70	1.10	1.00	626
THPC6045NV-181M	180	0.68	0.60	1.00	0.90	745
THPC6045NV-221M	220	0.60	0.50	0.88	0.77	900
THPC6045NV-331M	330	0.55	0.45	0.60	0.55	1400
THPC6045NV-471M	470	0.40	0.35	0.50	0.45	2050

Note:

1. All test data referenced to 25℃ ambient , $L_s: 1\text{MHz}/1\text{V}$.
2. Testing Instrument : HP4284A, CH11025, CH3302, CH1320 , CH1320S LCR METER / Rdc: CH502BC MICRO OHMMETER.
3. Heat Rated Current (I rms) 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.
7. Rated DC current: The lower value of I rms and Isat.

11. Typical Performance Curves

