Power Inductor

1. Features

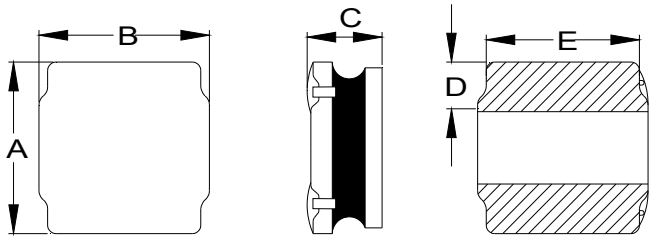
1. Low Profile Power Inductors.
2. 100% Lead(Pb)-Free & Halogen-Free and RoHS compliant.
3. High reliability-complied with AEC-Q200.

AEC-Q200

2. Applications

For automotive applications.

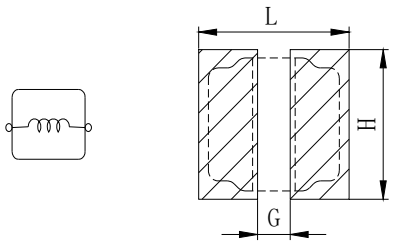
3. Dimension



*A	*B	*C	D	E
3.0±0.2	3.0±0.2	1.3±0.2	0.9±0.3	2.7±0.3

Unit:mm
*Termination are not included in dimension. For maximum overall dimensions with ternmination , add 0.1mm.

Recommend PC Board Pattern



L	G	H
3.5	0.9	3.5

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

4. Part Numbering

THPC	3015	BM	V	-	2R2	M
A	B	C	D		E	F

A: Series
B: Dimension
C: Lead Free
D: Code V=Vehicle
E: Inductance 2R2=2.20uH
F: Inductance Tolerance M=±20%
Anti-static packaging

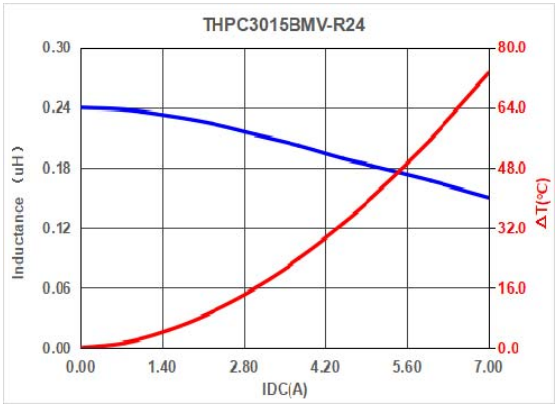
5. Specification

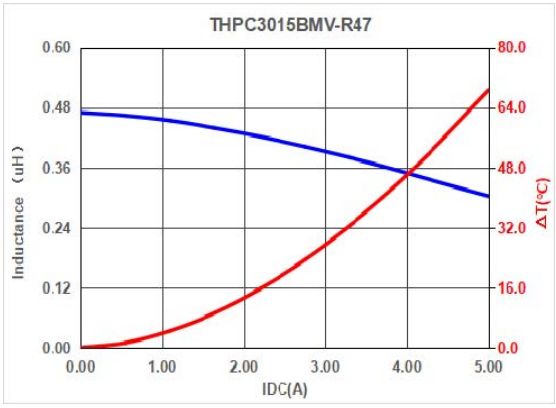
Part Number	Inductance (uH)±20% @ 0 A DC	I rms (A)		I sat (A)		DCR (mΩ)	
		Typ	Max	Typ	Max	Typ	Max
THPC3015BMV-R24M	0.24	5.00	4.50	6.00	5.50	13	16
THPC3015BMV-R47M	0.47	3.70	3.30	4.30	4.00	18	22
THPC3015BMV-R68M	0.68	3.50	3.20	3.80	3.50	23	28
THPC3015BMV-1R0M	1.00	3.00	2.70	3.00	2.70	30	36
THPC3015BMV-1R5M	1.50	2.70	2.50	2.40	2.10	36	43
THPC3015BMV-2R2M	2.20	2.50	2.30	2.10	1.90	60	72
THPC3015BMV-3R3M	3.30	2.20	2.00	1.70	1.50	80	96
THPC3015BMV-4R7M	4.70	1.90	1.70	1.50	1.30	112	134
THPC3015BMV-5R6M	5.60	1.80	1.60	1.40	1.20	135	162
THPC3015BMV-6R8M	6.80	1.70	1.50	1.30	1.10	172	206
THPC3015BMV-100M	10.0	1.50	1.30	1.00	0.90	220	264
THPC3015BMV-150M	15.0	1.20	1.00	0.85	0.72	310	372
THPC3015BMV-180M	18.0	1.10	0.92	0.73	0.65	380	456
THPC3015BMV-220M	22.0	1.00	0.85	0.68	0.59	450	540
THPC3015BMV-330M	33.0	0.85	0.75	0.57	0.51	780	940
THPC3015BMV-470M	47.0	0.70	0.60	0.46	0.41	1200	1440

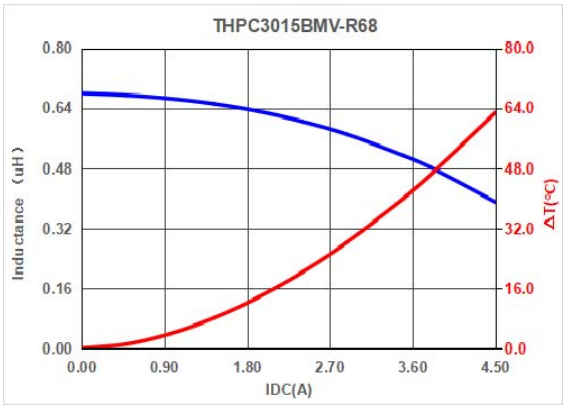
Note:

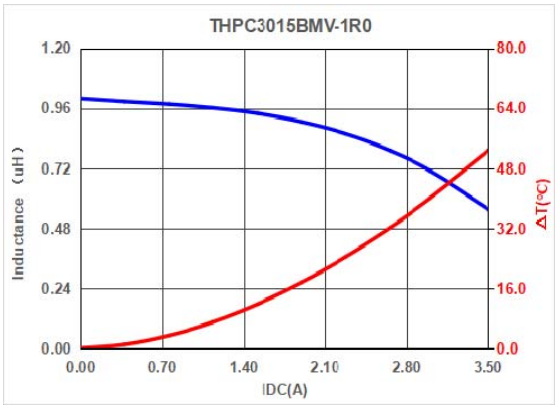
1. Test frequency : Ls : 100KHz /1.0V.
2. All test data are tested to 25°C ambient.
3. Testing Instrument (or eq.): Agilent 4284A,E4991A,4339B,KEYSIGHT E4980A/AL,chroma3302,3250,16502.
4. Heat rated current (Irms): current that cause temperature to rise approximately ∆T of 40°C.
5. Saturation current (Isat): current that cause L0 to drop approximately 30%.
6. The part temperature (ambient + temp. rise) should not exceed 125°C under worst case operating conditions.Circuit design, PCB trace and thickness, airflow and other cooling conditions all affect the part temperature. Part temperature should be verified in the end application.
7. Irms Test : temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.
8. Rated DC current: the lower value of Irms and Isat.

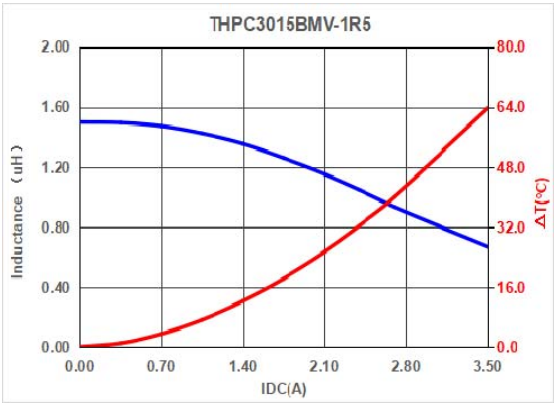
11. Typical Performance Curves

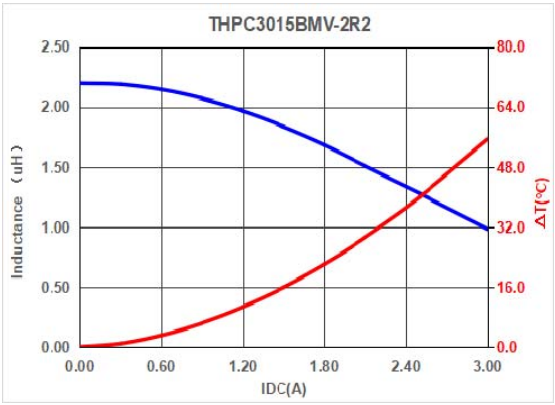


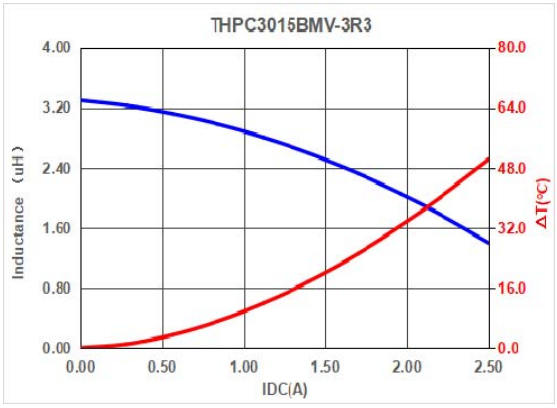


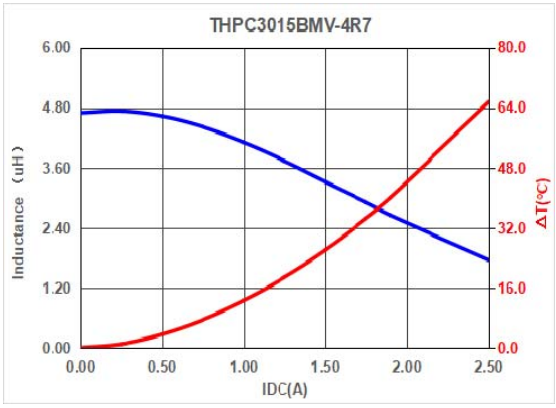


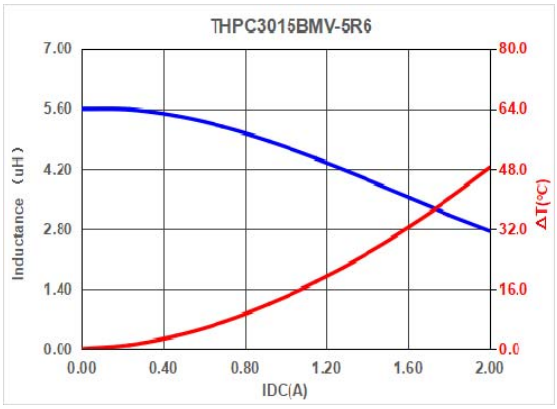


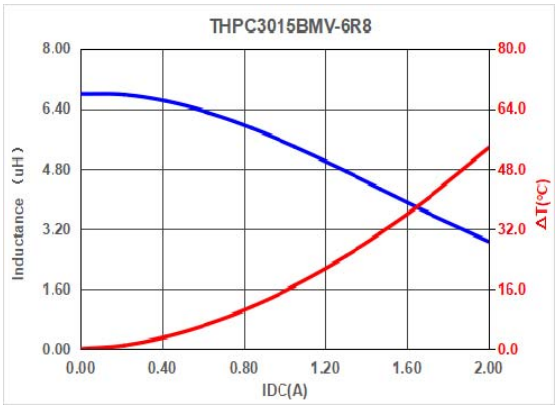


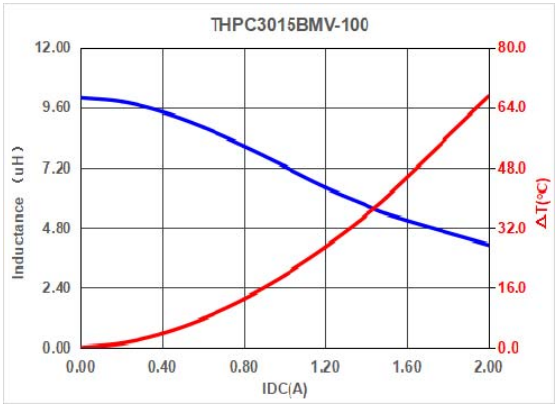


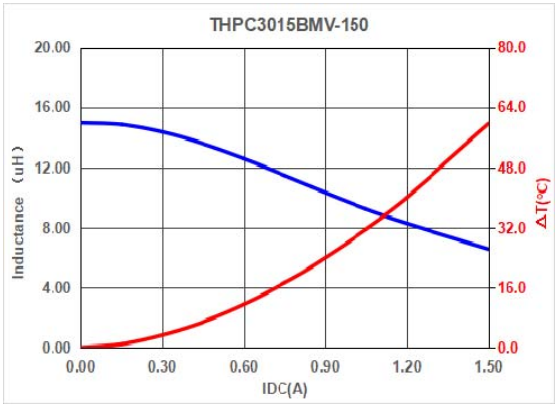


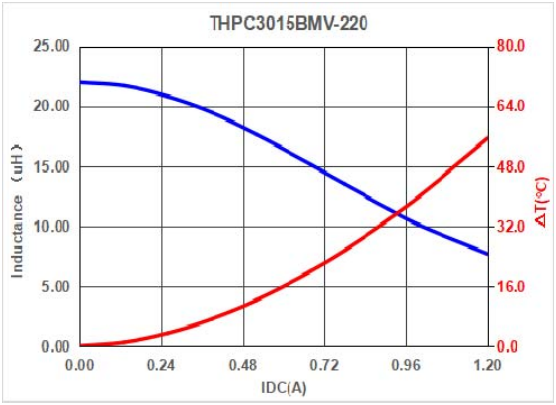


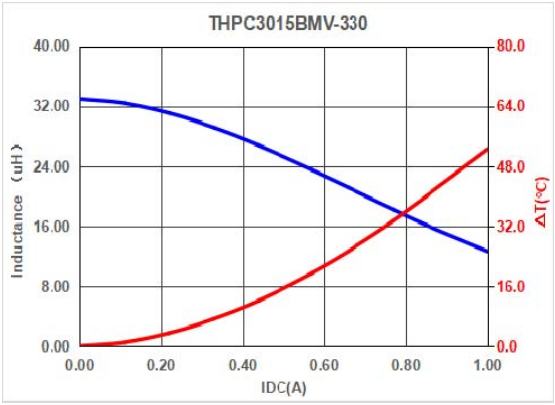

THPC3015BMV-5R6
Inductance (uH)
ΔT(℃)
IDC(A)
7.00
5.60
4.20
2.80
1.40
0.00
80.0
64.0
48.0
32.0
16.0
0.0
0.00
0.40
0.80
1.20
1.60
2.00

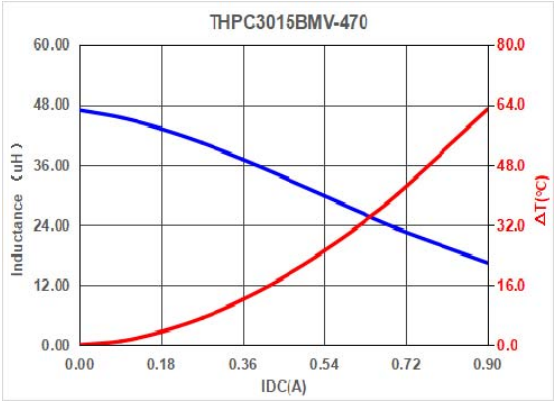

THPC3015BMV-6R8
Inductance (uH)
ΔT(℃)
IDC(A)
8.00
6.40
4.80
3.20
1.60
0.00
80.0
64.0
48.0
32.0
16.0
0.0
0.00
0.40
0.80
1.20
1.60
2.00


THPC3015BMV-100
Inductance (uH)
ΔT(℃)
IDC(A)
12.00
9.60
7.20
4.80
2.40
0.00
80.0
64.0
48.0
32.0
16.0
0.0
0.00
0.40
0.80
1.20
1.60
2.00


THPC3015BMV-150
Inductance (uH)
ΔT(℃)
IDC(A)
20.00
16.00
12.00
8.00
4.00
0.00
80.0
64.0
48.0
32.0
16.0
0.0
0.00
0.30
0.60
0.90
1.20
1.50


THPC3015BMV-220
Inductance (uH)
ΔT(℃)
IDC(A)
25.00
20.00
15.00
10.00
5.00
0.00
80.0
64.0
48.0
32.0
16.0
0.0
0.00
0.24
0.48
0.72
0.96
1.20


THPC3015BMV-330
Inductance (uH)
ΔT(℃)
IDC(A)
40.00
32.00
24.00
16.00
8.00
0.00
80.0
64.0
48.0
32.0
16.0
0.0
0.00
0.20
0.40
0.60
0.80
1.00


THPC3015BMV-470
Inductance (uH)
ΔT(℃)
IDC(A)
60.00
48.00
36.00
24.00
12.00
0.00
80.0
64.0
48.0
32.0
16.0
0.0
0.00
0.18
0.36
0.54
0.72
0.90