

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.

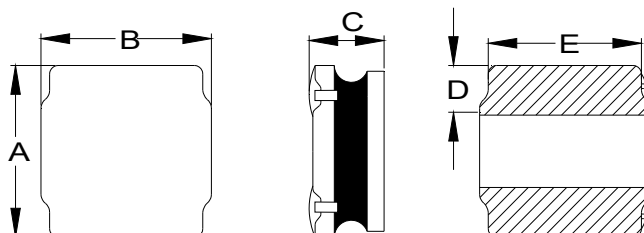


2. Applications

For automotive applications.

AEC-Q200

3. Dimension

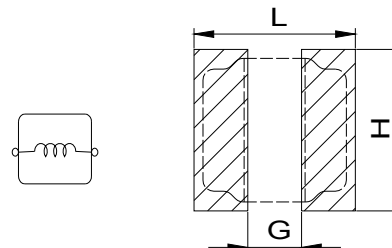


*A	*B	*C	D	E
3.0±0.2	3.0±0.2	1.0±0.2	0.9±0.3	2.7±0.3

Unit:mm

*Termination are not included in dimension. For maximum overall dimensions with termination , 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 **3012** **BM** **V** - **2R2** **M**

A B C D E F

A: Series

B: Dimension

C: Lead Free

D: Code

E: Inductance

F: Inductance Tolerance

V=Vehicle

2R2=2.20uH

M=±20%

Anti-static packaging

5. Specification

Part Number	Inductance (uH) $\pm 20\%$ @ 0 A DC	I rms (A)		I sat (A)		DCR (m Ω)	
		Typ	Max	Typ	Max	Typ	Max
THPC3012BMV-R22M	0.22	6.20	5.70	8.00	7.00	15	19
THPC3012BMV-R47M	0.47	5.20	4.80	4.80	4.40	24	29
THPC3012BMV-R68M	0.68	4.80	4.50	4.30	4.00	31	37
THPC3012BMV-1R0M	1.00	4.20	3.80	3.60	3.30	40	48
THPC3012BMV-1R2M	1.20	4.00	3.50	3.30	3.00	47	56
THPC3012BMV-1R5M	1.50	3.60	3.30	3.00	2.60	52	62
THPC3012BMV-2R2M	2.20	2.90	2.50	2.40	2.10	75	90
THPC3012BMV-2R7M	2.70	2.60	2.30	2.10	1.90	95	114
THPC3012BMV-3R3M	3.30	2.40	2.10	1.80	1.60	108	130
THPC3012BMV-4R7M	4.70	2.10	1.70	1.50	1.30	140	168
THPC3012BMV-5R6M	5.60	1.90	1.60	1.40	1.20	200	240
THPC3012BMV-6R8M	6.80	1.70	1.40	1.30	1.10	210	252
THPC3012BMV-100M	10.0	1.50	1.20	1.10	0.90	288	345
THPC3012BMV-150M	15.0	1.20	1.00	0.80	0.70	400	480
THPC3012BMV-220M	22.0	0.90	0.80	0.70	0.63	700	840
THPC3012BMV-330M	33.0	0.80	0.70	0.61	0.56	1100	1320
THPC3012BMV-470M	47.0	0.65	0.60	0.52	0.47	1500	1800

Note:

1. Test frequency : L_s : 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 (I_{rms}): current that cause temperature to rise approximately ΔT of 40°C.
5. Saturation current (I_{sat}): 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. I_{rms} 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 I_{rms} and I_{sat}.

11. Typical Performance Curves

