

Power Inductor

HPC4012BMV-SERIES

1、Features

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



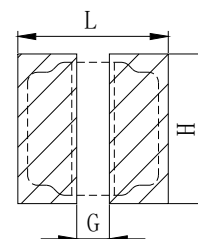
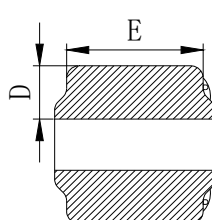
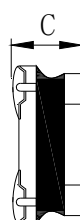
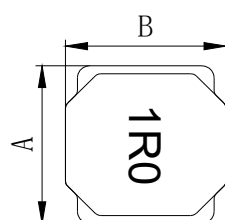
AEC-Q200



2、Applications

Automotive applications.

3、Dimension



Series	*A(mm)	*B(mm)	*C(mm)	D(mm)	E(mm)
HPC4012BMV	4.0±0.2	4.0±0.2	1.0±0.2	1.2±0.3	3.5±0.3

*Dimensions are not including the termination. For maximum overall dimensions with termination, add 0.1mm.

L(mm)	G(mm)	H(mm)
4.5	1.5	4.5

Note: 1. The above PCB layout reference only.
2. Recommend solder paste thickness at 0.10mm and above.

4、Part Numbering

HPC	4012	BM	V	-	1R0	-	M
A	B	C	D		E		F

- A: Series
B: Dimension
C: Lead Free
D: Code
E: Inductance
F: Inductance Tolerance

V=Vehicle

1R0=1.00uH

K=±10%, L=±15%, M=±20%, Y=±30%.

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

magnetic shielding

5、Specification

TAI-TECH Part Number	Inductance L0 A(uH)	I rms (A)		I sat (A)		DCR (m Ω)	
		Typ	max	typ	max	typ	max
HPC4012BMV-R47M	0.47	5.50	5.00	5.00	4.50	25	30
HPC4012BMV-R68M	0.68	5.00	4.60	4.60	4.30	36	43
HPC4012BMV-1R0M	1.00	4.40	4.20	4.00	3.60	43	52
HPC4012BMV-1R2M	1.20	4.20	4.00	3.80	3.40	44	53
HPC4012BMV-1R5M	1.50	3.90	3.60	3.30	3.00	52	62.4
HPC4012BMV-2R2M	2.20	3.30	3.00	2.50	2.30	66	79.2
HPC4012BMV-3R3M	3.30	2.80	2.60	1.90	1.70	81.6	98
HPC4012BMV-4R7M	4.70	2.50	2.30	1.60	1.40	112	134
HPC4012BMV-5R6M	5.60	2.10	1.90	1.40	1.30	135	162
HPC4012BMV-6R8M	6.80	1.80	1.60	1.25	1.15	165	198
HPC4012BMV-100M	10.0	1.40	1.20	1.00	0.90	230	276
HPC4012BMV-150M	15.0	1.20	1.10	0.90	0.80	320	384
HPC4012BMV-220M	22.0	1.00	0.90	0.70	0.60	470	564
HPC4012BMV-330M	33.0	0.80	0.70	0.60	0.55	850	1020
HPC4012BMV-470M	47.0	0.65	0.55	0.48	0.43	1100	1320

Note:

1. Test frequency : Ls : 100KHz /1.0V.
2. All test data referenced to 25℃ ambient.
3. Testing Instrument(or equ) : Agilent 4284A,E4991A,4339B,KEYSIGHT E4980A/AL,chroma3302,3250,16502.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately ΔT of 40℃
5. Saturation Current (Isat) will cause L0 to drop approximately 30%.
6. 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.
7. I rms Testing : 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 Isat.

11、Typical Performance Curves

