

SMD Power Inductor

HPC4020BMV-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

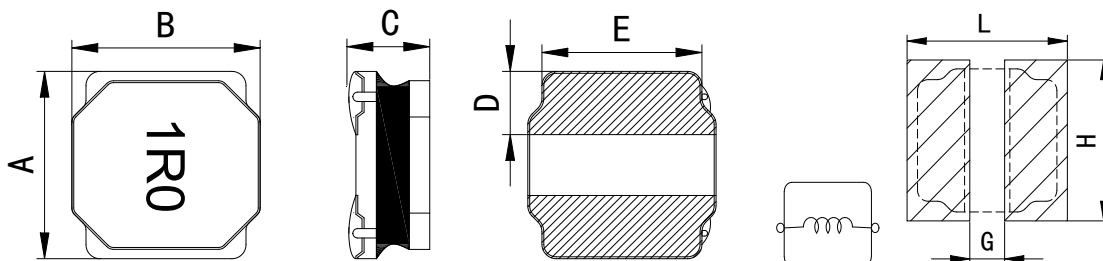


2、Applications

Automotive applications.

3. Dimension

Recommended Land pattern



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
HPC4020BMV	4.0±0.2	4.0±0.2	1.8±0.2	1.2±0.3	3.4±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 0.15mm and above.

4. Part Numbering

HPC	4020	BM	V	-	1R0	M
A	B	C	D		E	F

A: Series

B: Dimension

C: Control S/N

D: Code

E: Inductance

F: Inductance Tolerance

Black marking

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

Part Number	Inductance (μ H) $\pm$ 20% @ 0 A	Test Frequency (Hz)	I rms (A)	I sat (A)	DCR (m Ω)	
			Typ	Typ	Typ	Max
HPC4020BMV-1R0M	1.00	1V100K	3.80	4.60	20	24
HPC4020BMV-1R5M	1.50	1V100K	3.00	4.00	26	32
HPC4020BMV-2R2M	2.20	1V100K	2.60	3.50	35	42
HPC4020BMV-3R3M	3.30	1V100K	2.30	2.80	52	63
HPC4020BMV-4R7M	4.70	1V100K	1.90	2.20	67	80
HPC4020BMV-5R6M	5.60	1V100K	1.80	2.10	82	99
HPC4020BMV-6R8M	6.80	1V100K	1.70	2.00	92	110
HPC4020BMV-8R2M	8.20	1V100K	1.50	1.70	110	132
HPC4020BMV-100M	10.0	1V100K	1.40	1.60	140	168
HPC4020BMV-150M	15.0	1V100K	1.00	1.30	200	240
HPC4020BMV-180M	18.0	1V100K	0.90	1.20	240	288
HPC4020BMV-220M	22.0	1V100K	0.90	1.10	265	318
HPC4020BMV-270M	27.0	1V100K	0.80	0.90	345	414
HPC4020BMV-330M	33.0	1V100K	0.75	0.90	412	495
HPC4020BMV-470M	47.0	1V100K	0.55	0.67	580	696
HPC4020BMV-680M	68.0	1V100K	0.47	0.60	950	1140
HPC4020BMV-101M	100	1V100K	0.35	0.50	1400	1680

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. Irms 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 Irms and Isat.

11. Typical Performance Curves

