

# Power Inductor

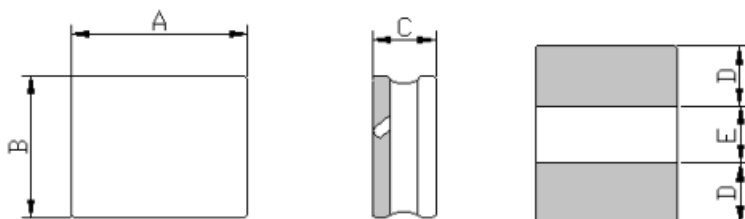
**AHP252012HV-SERIES**

## 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 with AEC-Q200
4. Operating temperature : -55~+125°C (Including self - temperature rise)



## 2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
AHP252012HV	2.5 -0.1/+0.2	2.0 -0.1/+0.2	1.2Max	0.75 ref.	1.00 ref.

## 3. Part Numbering

**AHP**   **252010**   **H**   **V**   -   **1R0**   **M**

A            B            C            D                            E            F

A: Series

B: Dimension

C: Lead Free

D: Category Code

E: Inductance

F: Inductance Tolerance

Material

V=Vehicle

1R0=1.00uH

M=±20%

## 4. Specification

TAI-TECH Part Number	Inductance (uH)	Tolerance (%)	Test Frequency (Hz)	DCR (Ω) typ.	DCR (Ω) Max.	I sat (A) typ.	I sat (A) Max.	I rms (A) typ	I rms (A) MAX
AHP252012HV-R24M	0.24	±20	1V/1M	0.011	0.015	7.80	6.50	7.00 (1) 7.50 (2)	6.00 (1) 6.50 (2)
AHP252012HV-R33M	0.33	±20	1V/1M	0.017	0.023	7.00	6.00	5.80 (1) 6.30 (2)	4.80 (1) 5.20 (2)
AHP252012HV-R47M	0.47	±20	1V/1M	0.021	0.027	6.50	5.50	5.00 (1) 5.50 (2)	4.20 (1) 4.70 (2)
AHP252012HV-R68M	0.68	±20	1V/1M	0.030	0.037	6.00	5.00	4.50 (1) 5.00 (2)	3.90 (1) 4.20 (2)
AHP252012HV-1R0M	1.0	±20	1V/1M	0.036	0.044	4.50	3.80	4.00 (1) 4.50 (2)	3.50 (1) 4.00 (2)
AHP252012HV-1R5M	1.5	±20	1V/1M	0.050	0.060	3.80	3.20	3.50 (1) 4.00 (2)	3.00 (1) 3.50 (2)
AHP252012HV-2R2M	2.2	±20	1V/1M	0.070	0.084	2.60	2.20	2.60 (1) 3.00 (2)	2.20 (1) 2.50 (2)
AHP252012HV-3R3M	3.3	±20	1V/1M	0.115	0.140	2.30	2.00	2.00 (1) 2.20 (2)	1.80 (1) 2.00 (2)
AHP252012HV-4R7M	4.7	±20	1V/1M	0.125	0.150	1.70	1.50	1.70 (1) 1.90 (2)	1.50 (1) 1.70 (2)

## Note:

Heat Rated Current (I<sub>rms</sub>) will cause the coil temperature rise approximately  $\Delta t$  of 40°C.

Saturation Current ( I<sub>sat</sub> ) will cause L0 to drop approximately 30%.

## Measurement board data

I<sub>rms</sub>1

Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

Pattern dimensions: 45 X 30 mm (Double side board)

Pattern thickness : 50  $\mu$ m

I<sub>rms</sub>2

Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

Pattern dimensions: 45 X 45 mm (Double side board)

Pattern thickness : 70  $\mu$ m

### 9. Typical Performance Curve

