

# Power Inductor

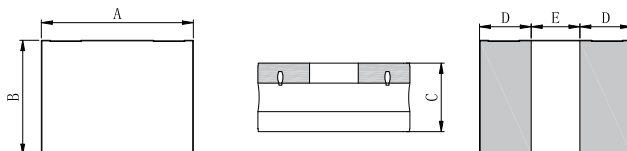
AHP252012RA-SERIES

## 1. Features

1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. Operating temperature : -40~+125°C (Including self - temperature rise).



## 2. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
AHP252012RA	2.50±0.20	2.00±0.20	1.10±0.10	0.80±0.20	0.95±0.20

## 3. Part Numbering

AHP
252012
RA
-
R24
M

A
B
C
D
E

A: Series

B: Dimension

C: Lead Free

Material

D: Inductance

R24=0.24uH; 1R5=1.50uH

E: Inductance Tolerance

M=±20%

## 4. Specification

TAI-TECH Part Number	Inductance (uH)	I rms (A) typ.	I rms (A) Max.	I sat (A) typ.	I sat (A) Max.	DCR (Ω) typ.	DCR (Ω) Max.
AHP252012RA-R24M	0.24	5.50 (1) 6.00 (2)	5.00 (1) 5.50 (2)	8.0	7.0	0.018	0.022
AHP252012RA-R33M	0.33	5.10 (1) 5.60 (2)	4.60 (1) 5.10 (2)	7.0	6.0	0.023	0.028
AHP252012RA-R47M	0.47	4.80 (1) 5.30 (2)	4.30 (1) 4.80 (2)	6.0	5.0	0.027	0.035
AHP252012RA-R68M	0.68	4.00 (1) 4.50 (2)	3.60 (1) 4.00 (2)	5.0	4.5	0.036	0.045
AHP252012RA-1R0M	1.00	3.50 (1) 3.80 (2)	3.20 (1) 3.50 (2)	4.3	3.8	0.045	0.058
AHP252012RA-1R5M	1.50	3.10 (1) 3.50 (2)	2.70 (1) 3.10 (2)	3.5	3.0	0.060	0.072
AHP252012RA-2R2M	2.20	2.50 (1) 2.80 (2)	2.20 (1) 2.50 (2)	3.1	2.6	0.090	0.108
AHP252012RA-3R3M	3.30	2.10 (1) 2.50 (2)	1.80 (1) 2.20 (2)	2.2	1.9	0.125	0.150
AHP252012RA-4R7M	4.70	1.70 (1) 1.90 (2)	1.40 (1) 1.60 (2)	2.0	1.7	0.190	0.220
AHP252012RA-6R8M	6.80	1.20 (1) 1.30 (2)	1.00 (1) 1.10 (2)	1.8	1.5	0.300	0.360
AHP252012RA-100M	10.0	1.00 (1) 1.10 (2)	0.90 (1) 1.00 (2)	1.4	1.1	0.420	0.475

## Note:

Inductance Test Frequency 1MHz/1V

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%.

Rated DC Current: The less value which is I<sub>rms</sub> or I<sub>sat</sub>.

I<sub>rms</sub> Testing

Temperature rise is highly dependent on many factors including pcb land pattern, Circuit design, component placement, frequency, cooling system, trace size, and proximity to other components.....etc, Therefore temperature rise should be verified in application conditions.

## 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 Curves

