

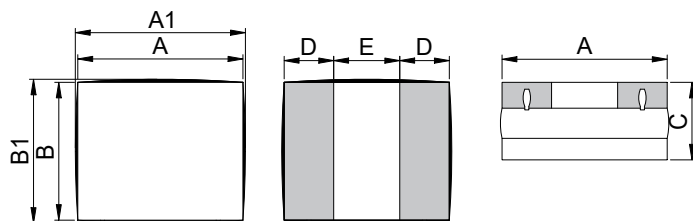
Power Inductor **AHP252012RA-SERIES**

1. Features

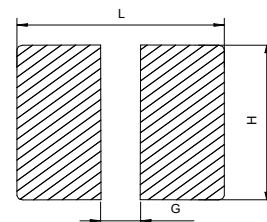
1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. Operating temperature :-40~+125°C (Including self - temperature rise).



2. Dimension



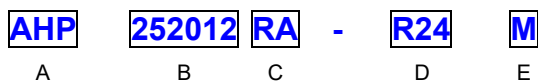
Recommended Land pattern



Series	A(mm)	A1(mm)	B(mm)	B1(mm)	C(mm)	D(mm)	E(mm)
AHP252012RA	2.50±0.20	2.8max	2.00±0.20	2.3max	1.10±0.10	0.80±0.20	0.95±0.20

L(mm)	G(mm)	H(mm)
2.9	0.8	2.4

3. Part Numbering



- A: Series
 - B: Dimension
 - C: Lead Free
 - D: Inductance
 - E: Inductance Tolerance
- Material
 R24=0.24uH; 1R5=1.50uH
 K=±10%, L=±15%, M=±20%, Y=±30%.

4. Specification

Part Number	Inductance (μH) $\pm 20\%$ @ 0 A	I rms (A)		I sat (A)		DCR (Ω)	
		Typ	Max	Typ	Max	Typ	Max
AHP252012RA-R24M	0.24	5.50 (1) 6.00 (2)	5.00 (1) 5.50 (2)	8.00	7.00	0.018	0.022
AHP252012RA-R33M	0.33	5.10 (1) 5.60 (2)	4.60 (1) 5.10 (2)	7.00	6.00	0.023	0.028
AHP252012RA-R47M	0.47	4.80 (1) 5.30 (2)	4.30 (1) 4.80 (2)	6.00	5.00	0.027	0.035
AHP252012RA-R68M	0.68	4.00 (1) 4.50 (2)	3.60 (1) 4.00 (2)	5.00	4.50	0.036	0.045
AHP252012RA-1R0M	1.00	3.50 (1) 3.80 (2)	3.20 (1) 3.50 (2)	4.30	3.80	0.045	0.058
AHP252012RA-1R5M	1.50	3.10 (1) 3.50 (2)	2.70 (1) 3.10 (2)	3.50	3.00	0.060	0.072
AHP252012RA-2R2M	2.20	2.50 (1) 2.80 (2)	2.20 (1) 2.50 (2)	3.10	2.60	0.090	0.108
AHP252012RA-3R3M	3.30	2.10 (1) 2.50 (2)	1.80 (1) 2.20 (2)	2.20	1.90	0.125	0.150
AHP252012RA-4R7M	4.70	1.70 (1) 1.90 (2)	1.40 (1) 1.60 (2)	2.00	1.70	0.190	0.220
AHP252012RA-6R8M	6.80	1.20 (1) 1.30 (2)	1.00 (1) 1.10 (2)	1.80	1.50	0.300	0.360
AHP252012RA-100M	10.0	1.00 (1) 1.10 (2)	0.90 (1) 1.00 (2)	1.40	1.10	0.420	0.475
AHP252012RA-150M	15.0	0.80 (1) 0.90 (2)	0.70 (1) 0.80 (2)	1.05	0.90	0.620	0.700
AHP252012RA-220M	22.0	0.60 (1) 0.70 (2)	0.50 (1) 0.60 (2)	0.80	0.70	0.890	1.000

Note:

Inductance Test Frequency 1MHz/1V

Heat Rated Current (I_{rms}) will cause the coil temperature rise approximately ΔT of 40°C

Saturation Current (I_{sat}) will cause L0 to drop approximately 30%.

Rated DC current: The lower value of I_{rms} and I_{sat}.

I_{rms} 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, There fore temperature rise should be verified in application conditions.

Measurement board data

I_{rms}1

Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

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

Pattern thickness : 50 μm

I_{rms}2

Material: FR4

Board dimensions : 100 X 50 X 1.6t mm

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

Pattern thickness : 70 μm

10. Typical Performance Curves

