

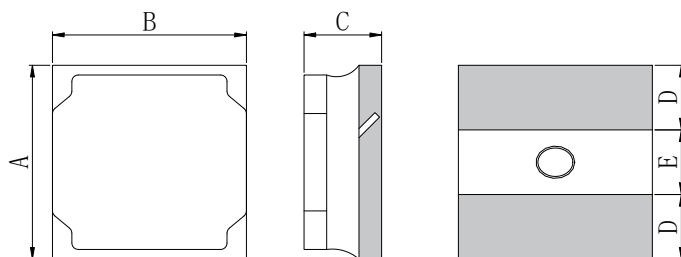
# Power Inductor

AHP3012HF-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℃ (Including self - temperature rise)

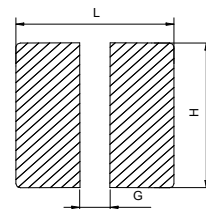
## 2. Dimension



| Series    | A(mm)   | B(mm)   | C(mm)  | D(mm)   | E(mm)   |
|-----------|---------|---------|--------|---------|---------|
| AHP3012HF | 3.0±0.2 | 3.0±0.2 | 1.2max | 1.0 ref | 1.0 ref |

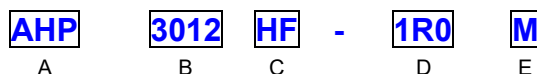


### Recommended Land pattern



| L(mm) | G(mm) | H(mm) |
|-------|-------|-------|
| 3.2   | 1.0   | 3.2   |

## 3. Part Numbering



A: Series

B: Dimension

C: Lead Free

D: Inductance

1R0=1.00uH

E: Inductance Tolerance

K=± 10%, L=± 15%, M=± 20%, Y=± 30%.

## 4. Specification

| Part Number    | Inductance<br>(uH) ±20%<br>@ 0 A | Test<br>Frequency<br>(Hz) | I rms (A) |      | I sat (A) |      | DCR (Ω) |       |
|----------------|----------------------------------|---------------------------|-----------|------|-----------|------|---------|-------|
|                |                                  |                           | Typ       | Max  | Typ       | Max  | Typ     | Max   |
| AHP3012HF-R33M | 0.33                             | 1V/1M                     | 5.50      | 4.50 | 9.00      | 7.00 | 0.020   | 0.024 |
| AHP3012HF-R47M | 0.47                             | 1V/1M                     | 5.20      | 4.20 | 7.50      | 6.50 | 0.025   | 0.030 |
| AHP3012HF-R68M | 0.68                             | 1V/1M                     | 4.50      | 3.70 | 6.50      | 5.50 | 0.032   | 0.038 |
| AHP3012HF-1R0M | 1.00                             | 1V/1M                     | 4.00      | 3.50 | 5.20      | 4.50 | 0.042   | 0.049 |
| AHP3012HF-1R5M | 1.50                             | 1V/1M                     | 3.50      | 3.00 | 4.50      | 4.00 | 0.060   | 0.072 |
| AHP3012HF-2R2M | 2.20                             | 1V/1M                     | 2.80      | 2.30 | 3.60      | 3.00 | 0.090   | 0.108 |
| AHP3012HF-3R3M | 3.30                             | 1V/1M                     | 2.10      | 1.70 | 3.00      | 2.50 | 0.130   | 0.156 |
| AHP3012HF-4R7M | 4.70                             | 1V/1M                     | 1.80      | 1.50 | 2.60      | 2.30 | 0.180   | 0.216 |
| AHP3012HF-6R8M | 6.80                             | 1V/1M                     | 1.50      | 1.30 | 2.20      | 1.90 | 0.250   | 0.300 |
| AHP3012HF-100M | 10.0                             | 1V/1M                     | 1.40      | 1.20 | 1.50      | 1.30 | 0.290   | 0.350 |

Note:

Isat: Saturation Current (Isat) will cause L0 to drop approximately 30%. @ ambient temp. 25℃

Irms: Heat Rated Current (Irms) will cause the coil temperature rise approximately ΔT of 40℃

Rated DC current: The lower value of Irms and Isat.

Measurement board data

Material : FR4

Board dimensions : 100 X 50 X 1.6t mm

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

Pattern thickness : 50 μm

## 10. Typical Performance Curve

