

# Power Inductor

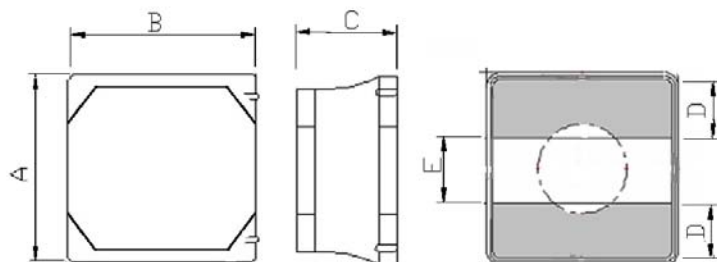
HPC4012TF-SERIES

## 1. Features

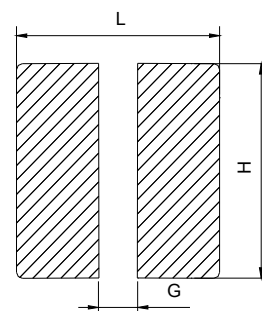
1. This specification applies Low Profile Power Inductors.
2. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
3. Operating temperature : -40~+125°C (Including self - temperature rise)



## 2. Dimension



### Recommended PC Board Pattern



| Series    | A(mm)   | B(mm)   | C(mm)   | D(mm)   | E(mm)   |
|-----------|---------|---------|---------|---------|---------|
| HPC4012TF | 4.0±0.2 | 4.0±0.2 | 1.2 max | 1.2 ref | 1.6 ref |

Units: mm

| L(mm) | G(mm) | H(mm) |
|-------|-------|-------|
| 4.2   | 1.2   | 4.2   |

## 3. Part Numbering

HPC
4012
TF
-
100
M

A

B

C

D

E

A: Series

B: Dimension

C: Lead Free

D: Inductance 100=10uH

E: Inductance Tolerance K=±10%, L=±15%, M=±20%, Y=±30%.

## 4. Specification

| TAI-TECH<br>Part Number | Inductance<br>(uH) | Test<br>Frequency<br>(Hz) | DCR<br>(Ω) ±20% | I sat (A) |      | I rms (A) |      |
|-------------------------|--------------------|---------------------------|-----------------|-----------|------|-----------|------|
|                         |                    |                           |                 | typ       | Max  | typ       | Max  |
| HPC4012TF -1R0Y         | 1.0                | 1V100K                    | 0.042           | 3.30      | 2.80 | 2.50      | 2.20 |
| HPC4012TF -2R2M         | 2.2                | 1V100K                    | 0.060           | 1.95      | 1.65 | 2.20      | 1.90 |
| HPC4012TF -3R3M         | 3.3                | 1V100K                    | 0.070           | 1.60      | 1.40 | 1.90      | 1.70 |
| HPC4012TF -4R7M         | 4.7                | 1V100K                    | 0.095           | 1.40      | 1.20 | 1.70      | 1.50 |
| HPC4012TF -6R8M         | 6.8                | 1V100K                    | 0.125           | 1.10      | 0.90 | 1.50      | 1.30 |
| HPC4012TF -100M         | 10                 | 1V100K                    | 0.180           | 1.00      | 0.80 | 1.30      | 1.10 |
| HPC4012TF -150M         | 15                 | 1V100K                    | 0.260           | 0.80      | 0.65 | 0.95      | 0.75 |
| HPC4012TF -220M         | 22                 | 1V100K                    | 0.400           | 0.60      | 0.50 | 0.72      | 0.62 |

Note:

Isat : Saturation Current (Isat) will cause L0 to drop approximately 30%.

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

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

## 10. Typical Performance Curves

