

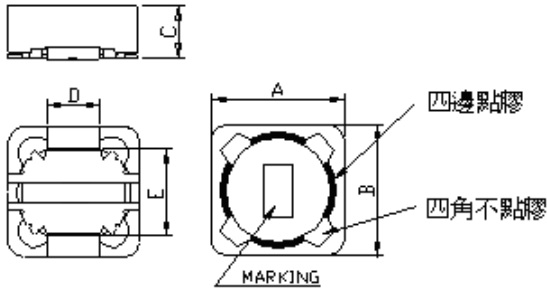
**SMD Type Power Inductor** **TPRHC0704F-SERIES-G01**

**1. Features**

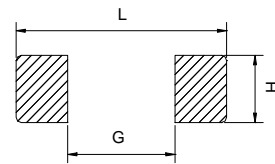
- 1. Magnetic Shielded surface mount inductor with high current rating.
- 2. Low resistance to keep power loss minimum.
- 3. This component is compliant with RoHS legislation and also support lead-free soldering.



**2. Dimension**



**Recommended PC Board Pattern**



| Series     | A(mm)    | B(mm)    | C(mm)    | D(mm)   | E(mm)   |
|------------|----------|----------|----------|---------|---------|
| TPRHC0704F | 7.5 max. | 7.5 max. | 4.5 max. | 2.7±0.2 | 5.1±0.2 |

| L (mm) | G (mm) | H (mm) |
|--------|--------|--------|
| 7.5    | 5.1    | 3.1    |

Units: mm

**3. Part Numbering**



- A: Series
- B: Dimension
- C: Lead free type
- D: Inductance 100=10uH
- E: Inductance Tolerance M=±20%
- F: Control S/N

## 4. Specification

| TAI-TECH<br>Part Number | Inductance (uH) |                     | DCR<br>( $\Omega$ ) max. | Rated Current<br>(A) max. |
|-------------------------|-----------------|---------------------|--------------------------|---------------------------|
|                         | Tolerance       | Test Frequency (Hz) |                          |                           |
| TPRHC0704F-100M-G01     | 10 $\pm$ 20%    | 1K/1V               | 0.049                    | 1.84                      |
| TPRHC0704F-120M-G01     | 12 $\pm$ 20%    | 1K/1V               | 0.058                    | 1.71                      |
| TPRHC0704F-150M-G01     | 15 $\pm$ 20%    | 1K/1V               | 0.081                    | 1.47                      |
| TPRHC0704F-180M-G01     | 18 $\pm$ 20%    | 1K/1V               | 0.091                    | 1.31                      |
| TPRHC0704F-220M-G01     | 22 $\pm$ 20%    | 1K/1V               | 0.11                     | 1.23                      |
| TPRHC0704F-270M-G01     | 27 $\pm$ 20%    | 1K/1V               | 0.15                     | 1.12                      |
| TPRHC0704F-330M-G01     | 33 $\pm$ 20%    | 1K/1V               | 0.17                     | 0.96                      |
| TPRHC0704F-390M-G01     | 39 $\pm$ 20%    | 1K/1V               | 0.23                     | 0.91                      |
| TPRHC0704F-470M-G01     | 47 $\pm$ 20%    | 1K/1V               | 0.26                     | 0.88                      |
| TPRHC0704F-560M-G01     | 56 $\pm$ 20%    | 1K/1V               | 0.35                     | 0.75                      |
| TPRHC0704F-680M-G01     | 68 $\pm$ 20%    | 1K/1V               | 0.38                     | 0.69                      |
| TPRHC0704F-820M-G01     | 82 $\pm$ 20%    | 1K/1V               | 0.43                     | 0.61                      |
| TPRHC0704F-101M-G01     | 100 $\pm$ 20%   | 1K/0.25V            | 0.61                     | 0.60                      |
| TPRHC0704F-121M-G01     | 120 $\pm$ 20%   | 1K/0.25V            | 0.66                     | 0.52                      |
| TPRHC0704F-151M-G01     | 150 $\pm$ 20%   | 1K/0.25V            | 0.88                     | 0.46                      |
| TPRHC0704F-181M-G01     | 180 $\pm$ 20%   | 1K/0.25V            | 0.98                     | 0.42                      |
| TPRHC0704F-221M-G01     | 220 $\pm$ 20%   | 1K/0.25V            | 1.17                     | 0.36                      |
| TPRHC0704F-271M-G01     | 270 $\pm$ 20%   | 1K/0.25V            | 1.64                     | 0.34                      |
| TPRHC0704F-331M-G01     | 330 $\pm$ 20%   | 1K/0.25V            | 1.86                     | 0.32                      |
| TPRHC0704F-391M-G01     | 390 $\pm$ 20%   | 1K/0.25V            | 2.85                     | 0.29                      |
| TPRHC0704F-471M-G01     | 470 $\pm$ 20%   | 1K/0.25V            | 3.01                     | 0.26                      |
| TPRHC0704F-561M-G01     | 560 $\pm$ 20%   | 1K/0.25V            | 3.62                     | 0.23                      |
| TPRHC0704F-681M-G01     | 680 $\pm$ 20%   | 1K/0.25V            | 4.63                     | 0.22                      |
| TPRHC0704F-821M-G01     | 820 $\pm$ 20%   | 1K/0.25V            | 5.20                     | 0.20                      |
| TPRHC0704F-102M-G01     | 1000 $\pm$ 20%  | 1K/0.25V            | 6.00                     | 0.18                      |

Note:

Based on inductance change ( $\Delta L/L0 : \leq -35\%$ ) @ ambient temp. 25°C

Based on temperature rise ( $\Delta T : 40^\circ\text{C}$  typ.)

# SMD Type Power Inductor

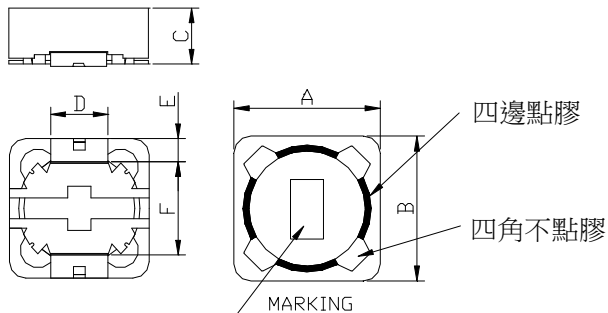
**TPRHC1204F-SERIES**

## 1. Features

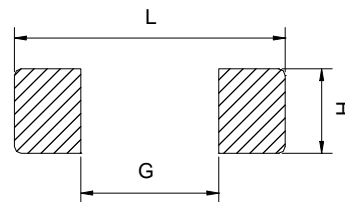
1. Magnetic Shielded surface mount inductor with high current rating.
2. Low resistance to keep power loss minimum.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.



## 2. Dimension



### Recommended PC Board Pattern

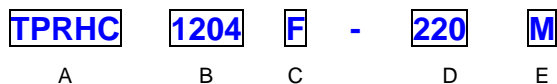


| Series     | A(mm)     | B(mm)     | C(mm)    | D(mm)    | E(mm)    | F(mm)    |
|------------|-----------|-----------|----------|----------|----------|----------|
| TPRHC1204F | 12.8 max. | 12.8 max. | 5.0 max. | 5.0 ref. | 2.2 ref. | 7.6 ref. |

| L(mm) | G(mm) | H(mm) |
|-------|-------|-------|
| 12.6  | 7.0   | 5.4   |

Units: mm

## 3. Part Numbering



A: Series (the tin clip)

B: Dimension

C: Lead free type

D: Inductance

220=22.0uH , 3R9=3.9uH , 221=220uH

E: Inductance Tolerance

M=±20% , Y=±30%

## 4. Specification

| TAI-TECH<br>Part Number | Inductance<br>( $\mu$ H) | Tolerance<br>(%) | Test Frequency<br>(Hz) | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. |
|-------------------------|--------------------------|------------------|------------------------|--------------------------|-----------------|
| TPRHC 1204F-3R9Y        | 3.9                      | $\pm 30\%$       | 1V/100K                | 0.015                    | 6.50            |
| TPRHC 1204F-4R7Y        | 4.7                      | $\pm 30\%$       | 1V/100K                | 0.018                    | 5.70            |
| TPRHC 1204F-6R8Y        | 6.8                      | $\pm 30\%$       | 1V/100K                | 0.023                    | 4.90            |
| TPRHC 1204F-8R2Y        | 8.2                      | $\pm 30\%$       | 1V/100K                | 0.026                    | 4.60            |
| TPRHC 1204F-100M        | 10                       | $\pm 20\%$       | 1V/100K                | 0.028                    | 4.50            |
| TPRHC 1204F-120M        | 12                       | $\pm 20\%$       | 1V/100K                | 0.038                    | 4.00            |
| TPRHC 1204F-150M        | 15                       | $\pm 20\%$       | 1V/100K                | 0.052                    | 3.20            |
| TPRHC 1204F-180M        | 18                       | $\pm 20\%$       | 1V/100K                | 0.060                    | 3.10            |
| TPRHC 1204F-220M        | 22                       | $\pm 20\%$       | 1V/100K                | 0.070                    | 2.90            |
| TPRHC 1204F-270M        | 27                       | $\pm 20\%$       | 1V/100K                | 0.080                    | 2.80            |
| TPRHC 1204F-820M        | 82                       | $\pm 20\%$       | 1V/100K                | 0.260                    | 1.30            |
| TPRHC 1204F-101M        | 100                      | $\pm 20\%$       | 1V/100K                | 0.308                    | 1.20            |
| TPRHC 1204F-121M        | 120                      | $\pm 20\%$       | 1V/100K                | 0.380                    | 1.10            |
| TPRHC 1204F-151M        | 150                      | $\pm 20\%$       | 1V/100K                | 0.530                    | 0.95            |
| TPRHC 1204F-181M        | 180                      | $\pm 20\%$       | 1V/100K                | 0.620                    | 0.85            |
| TPRHC 1204F-221M        | 220                      | $\pm 20\%$       | 1V/100K                | 0.700                    | 0.80            |
| TPRHC 1204F-271M        | 270                      | $\pm 20\%$       | 1V/100K                | 0.870                    | 0.60            |
| TPRHC 1204F-331M        | 330                      | $\pm 20\%$       | 1V/100K                | 0.990                    | 0.50            |

Note:

Based on inductance change ( $\Delta L/L0 : \leq -35\%$ ) @ ambient temp. 25°C

Based on temperature rise ( $\Delta T : 40^\circ\text{C}$  typ.)

# SMD Type Power Inductor

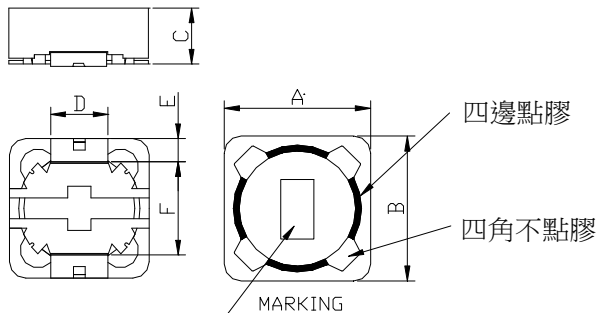
**TPRHC1205F-SERIES**

## 1. Features

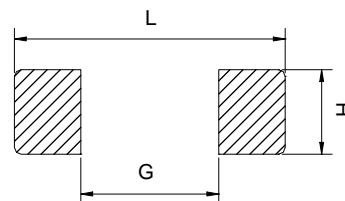
1. Magnetic Shielded surface mount inductor with high current rating.
2. Low resistance to keep power loss minimum.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.



## 2. Dimension



### Recommended PC Board Pattern

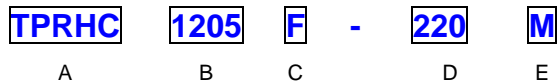


| Series     | A(mm)     | B(mm)     | C(mm)    | D(mm)    | E(mm)    | F(mm)    |
|------------|-----------|-----------|----------|----------|----------|----------|
| TPRHC1205F | 12.8 max. | 12.8 max. | 6.0 max. | 5.0 ref. | 2.2 ref. | 7.6 ref. |

| L(mm) | G(mm) | H(mm) |
|-------|-------|-------|
| 12.6  | 7.0   | 5.4   |

Units: mm

## 3. Part Numbering



- A: Series (the tin clip)
- B: Dimension
- C: Lead free type
- D: Inductance                      220=22.0uH , 2R1=2.1uH , 221=220uH
- E: Inductance Tolerance            M=±20% , Y=±30%

## 4. Specification

| TAI-TECH<br>Part Number | Inductance<br>( $\mu$ H) | Tolerance<br>(%) | Test Frequency<br>(Hz) | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. |
|-------------------------|--------------------------|------------------|------------------------|--------------------------|-----------------|
| TPRHC 1205F-1R3Y        | 1.3                      | $\pm 30\%$       | 1V/100K                | 0.012                    | 8.00            |
| TPRHC 1205F-2R1Y        | 2.1                      | $\pm 30\%$       | 1V/100K                | 0.014                    | 7.00            |
| TPRHC 1205F-3R1Y        | 3.1                      | $\pm 30\%$       | 1V/100K                | 0.017                    | 6.00            |
| TPRHC 1205F-4R4Y        | 4.4                      | $\pm 30\%$       | 1V/100K                | 0.020                    | 5.00            |
| TPRHC 1205F-5R8Y        | 5.8                      | $\pm 30\%$       | 1V/100K                | 0.021                    | 4.40            |
| TPRHC 1205F-7R5Y        | 7.5                      | $\pm 30\%$       | 1V/100K                | 0.024                    | 4.20            |
| TPRHC 1205F-100M        | 10                       | $\pm 20\%$       | 1V/1K                  | 0.025                    | 4.00            |
| TPRHC 1205F-120M        | 12                       | $\pm 20\%$       | 1V/1K                  | 0.027                    | 3.50            |
| TPRHC 1205F-150M        | 15                       | $\pm 20\%$       | 1V/1K                  | 0.030                    | 3.30            |
| TPRHC 1205F-180M        | 18                       | $\pm 20\%$       | 1V/1K                  | 0.034                    | 3.00            |
| TPRHC 1205F-270M        | 27                       | $\pm 20\%$       | 1V/1K                  | 0.051                    | 2.30            |
| TPRHC 1205F-330M        | 33                       | $\pm 20\%$       | 1V/1K                  | 0.057                    | 2.10            |
| TPRHC 1205F-390M        | 39                       | $\pm 20\%$       | 1V/1K                  | 0.068                    | 2.00            |
| TPRHC 1205F-470M        | 47                       | $\pm 20\%$       | 1V/1K                  | 0.075                    | 1.80            |
| TPRHC 1205F-560M        | 56                       | $\pm 20\%$       | 1V/1K                  | 0.110                    | 1.70            |
| TPRHC 1205F-680M        | 68                       | $\pm 20\%$       | 1V/1K                  | 0.120                    | 1.50            |
| TPRHC 1205F-820M        | 82                       | $\pm 20\%$       | 1V/1K                  | 0.140                    | 1.40            |
| TPRHC 1205F-101M        | 100                      | $\pm 20\%$       | 1V/1K                  | 0.160                    | 1.30            |
| TPRHC 1205F-121M        | 120                      | $\pm 20\%$       | 1V/1K                  | 0.170                    | 1.10            |
| TPRHC 1205F-151M        | 150                      | $\pm 20\%$       | 1V/1K                  | 0.230                    | 1.00            |
| TPRHC 1205F-181M        | 180                      | $\pm 20\%$       | 1V/1K                  | 0.290                    | 0.90            |
| TPRHC 1205F-221M        | 220                      | $\pm 20\%$       | 1V/1K                  | 0.400                    | 0.80            |
| TPRHC 1205F-271M        | 270                      | $\pm 20\%$       | 1V/1K                  | 0.460                    | 0.75            |
| TPRHC 1205F-331M        | 330                      | $\pm 20\%$       | 1V/1K                  | 0.510                    | 0.68            |
| TPRHC 1205F-391M        | 390                      | $\pm 20\%$       | 1V/1K                  | 0.690                    | 0.65            |
| TPRHC 1205F-471M        | 470                      | $\pm 20\%$       | 1V/1K                  | 0.770                    | 0.58            |
| TPRHC 1205F-561M        | 560                      | $\pm 20\%$       | 1V/1K                  | 0.860                    | 0.54            |
| TPRHC 1205F-681M        | 680                      | $\pm 20\%$       | 1V/1K                  | 1.200                    | 0.48            |
| TPRHC 1205F-821M        | 820                      | $\pm 20\%$       | 1V/1K                  | 1.340                    | 0.43            |
| TPRHC 1205F-102M        | 1000                     | $\pm 20\%$       | 1V/1K                  | 1.530                    | 0.40            |

Note:

Based on inductance change ( $\Delta L/L0 : \leq -35\%$ ) @ ambient temp. 25°C

Based on temperature rise ( $\Delta T : 40^\circ\text{C}$  typ.)

# SMD Type Power Inductor

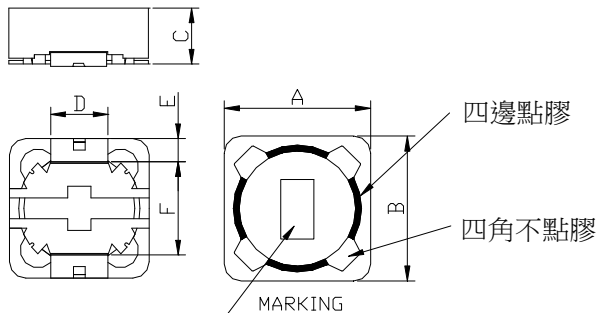
**TPRHC1207F-SERIES**

## 1. Features

1. Magnetic Shielded surface mount inductor with high current rating.
2. Low resistance to keep power loss minimum.
3. 100% Lead(Pb) & Halogen-Free and RoHS compliant.



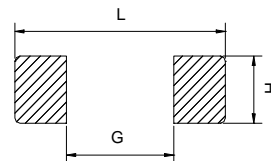
## 2. Dimension



| Series     | A(mm)     | B(mm)     | C(mm)    | D(mm)    | E(mm)    | F(mm)    |
|------------|-----------|-----------|----------|----------|----------|----------|
| TPRHC1207F | 12.8 max. | 12.8 max. | 8.5 max. | 5.0 ref. | 2.2 ref. | 7.6 ref. |

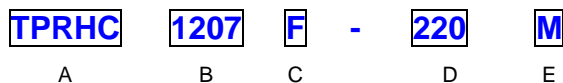
Units: mm

### Recommended PC Board Pattern



| L(mm) | G(mm) | H(mm) |
|-------|-------|-------|
| 12.6  | 7.0   | 5.4   |

## 3. Part Numbering



- A: Series (the tin clip)
- B: Dimension
- C: Lead free type
- D: Inductance                      220=22.0uH, 2R4=2.4uH, 221=220uH
- E: Inductance Tolerance            M=±20%, Y=±30%

## 4. Specification

| TAI-TECH<br>Part Number | Inductance<br>( $\mu$ H) | Tolerance<br>(%) | Test Frequency<br>(Hz) | DCR<br>( $\Omega$ ) max. | IDC<br>(A) max. |
|-------------------------|--------------------------|------------------|------------------------|--------------------------|-----------------|
| TPRHC 1207F-1R2Y        | 1.2                      | $\pm 30\%$       | 1V/100K                | 0.0070                   | 9.80            |
| TPRHC 1207F-2R2Y        | 2.2                      | $\pm 30\%$       | 1V/100K                | 0.0115                   | 8.00            |
| TPRHC 1207F-2R4Y        | 2.4                      | $\pm 30\%$       | 1V/100K                | 0.0115                   | 8.00            |
| TPRHC 1207F-3R3Y        | 3.3                      | $\pm 30\%$       | 1V/100K                | 0.0135                   | 12.00           |
| TPRHC 1207F-3R5Y        | 3.5                      | $\pm 30\%$       | 1V/100K                | 0.0135                   | 7.50            |
| TPRHC 1207F-4R7Y        | 4.7                      | $\pm 30\%$       | 1V/100K                | 0.0158                   | 6.80            |
| TPRHC 1207F-6R1Y        | 6.1                      | $\pm 30\%$       | 1V/100K                | 0.0176                   | 6.60            |
| TPRHC 1207F-6R8Y        | 6.8                      | $\pm 30\%$       | 1V/100K                | 0.0185                   | 6.20            |
| TPRHC 1207F-7R6Y        | 7.6                      | $\pm 30\%$       | 1V/100K                | 0.0200                   | 5.90            |
| TPRHC 1207F-100M        | 10                       | $\pm 20\%$       | 1V/1K                  | 0.0216                   | 5.40            |
| TPRHC 1207F-120M        | 12                       | $\pm 20\%$       | 1V/1K                  | 0.0243                   | 4.90            |
| TPRHC 1207F-150M        | 15                       | $\pm 20\%$       | 1V/1K                  | 0.0270                   | 4.50            |
| TPRHC 1207F-180M        | 18                       | $\pm 20\%$       | 1V/1K                  | 0.0392                   | 3.90            |
| TPRHC 1207F-220M        | 22                       | $\pm 20\%$       | 1V/1K                  | 0.0432                   | 3.60            |
| TPRHC 1207F-270M        | 27                       | $\pm 20\%$       | 1V/1K                  | 0.0459                   | 3.40            |
| TPRHC 1207F-330M        | 33                       | $\pm 20\%$       | 1V/1K                  | 0.0648                   | 3.00            |
| TPRHC 1207F-390M        | 39                       | $\pm 20\%$       | 1V/1K                  | 0.0729                   | 2.75            |
| TPRHC 1207F-470M        | 47                       | $\pm 20\%$       | 1V/1K                  | 0.1000                   | 2.50            |
| TPRHC 1207F-560M        | 56                       | $\pm 20\%$       | 1V/1K                  | 0.1100                   | 2.35            |
| TPRHC 1207F-680M        | 68                       | $\pm 20\%$       | 1V/1K                  | 0.1400                   | 2.10            |
| TPRHC 1207F-820M        | 82                       | $\pm 20\%$       | 1V/1K                  | 0.1600                   | 1.95            |
| TPRHC 1207F-101M        | 100                      | $\pm 20\%$       | 1V/1K                  | 0.2200                   | 1.70            |
| TPRHC 1207F-121M        | 120                      | $\pm 20\%$       | 1V/1K                  | 0.2500                   | 1.60            |
| TPRHC 1207F-151M        | 150                      | $\pm 20\%$       | 1V/1K                  | 0.2800                   | 1.42            |
| TPRHC 1207F-181M        | 180                      | $\pm 20\%$       | 1V/1K                  | 0.3500                   | 1.30            |
| TPRHC 1207F-221M        | 220                      | $\pm 20\%$       | 1V/1K                  | 0.3900                   | 1.16            |
| TPRHC 1207F-271M        | 270                      | $\pm 20\%$       | 1V/1K                  | 0.5600                   | 1.06            |
| TPRHC 1207F-331M        | 330                      | $\pm 20\%$       | 1V/1K                  | 0.6400                   | 0.95            |
| TPRHC 1207F-391M        | 390                      | $\pm 20\%$       | 1V/1K                  | 0.7000                   | 0.88            |
| TPRHC 1207F-471M        | 470                      | $\pm 20\%$       | 1V/1K                  | 0.9800                   | 0.79            |
| TPRHC 1207F-561M        | 560                      | $\pm 20\%$       | 1V/1K                  | 1.0700                   | 0.73            |
| TPRHC 1207F-681M        | 680                      | $\pm 20\%$       | 1V/1K                  | 1.4600                   | 0.67            |
| TPRHC 1207F-821M        | 820                      | $\pm 20\%$       | 1V/1K                  | 1.6400                   | 0.60            |
| TPRHC 1207F-102M        | 1000                     | $\pm 20\%$       | 1V/1K                  | 1.8200                   | 0.55            |

Note:

Based on inductance change ( $\Delta L/L0 : \leq -35\%$ ) @ ambient temp. 25°CBased on temperature rise ( $\Delta T : 40^\circ\text{C}$  typ.)