



# Wire Wound SMD Power Inductors HPWL-DRRH Series



## FEATURES

- ◆ Various high power inductors are superior high saturation
- ◆ Suitable for surface mounting equipment

## APPLICATIONS

- ◆ Power supply choke for small electrical equipments such as VTR, LCD display, Notebook, communication equipment, and so on.

## PRODUCT IDENTIFICATION

**HPWL** : **FR**      **RH**      **2D11**      **T**      **1R2**      **N**      **F**      **XX**  
 A                      B                      C                      D                      E                      F                      G                      H                      I

A

|      |                                    |
|------|------------------------------------|
| Type |                                    |
| HPWL | Wire Wound SMD Type Power Inductor |

B

|            |          |
|------------|----------|
| FH         | Material |
| F= ferrite | R type   |

C

|           |
|-----------|
| Base type |
| metallic  |

D

|                     |
|---------------------|
| External Dimensions |
| 2D11~3D16           |

E

|         |               |
|---------|---------------|
| Packing |               |
| T       | Tape and reel |

F

|                    |               |
|--------------------|---------------|
| Nominal Inductance |               |
| Example            | Nominal Value |
| 1R2                | 1.2μH         |
| 101                | 100μH         |

G

|                      |      |
|----------------------|------|
| Inductance Tolerance |      |
| M                    | ±20% |
| N                    | ±30% |

H

|                                   |
|-----------------------------------|
| Hazardous Substance Free Products |
| F                                 |

I

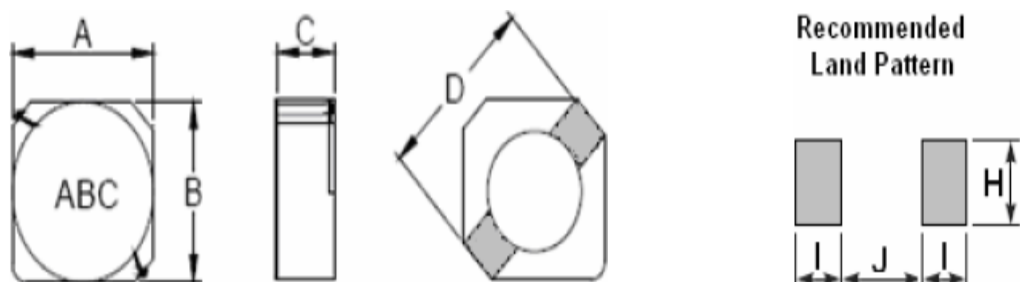
|               |
|---------------|
| Internal code |
| XX            |

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## SHAPE AND DIMENSIONS



Unit: mm

| Series        | A Max. | B Max. | C Max. | D Typ. | I Typ. | J Typ. | H Typ. |
|---------------|--------|--------|--------|--------|--------|--------|--------|
| HPWL-FRRH2D11 | 3.3    | 3.3    | 1.3    | 4.4    | 1.3    | 1.7    | 1.3    |
| HPWL-FRRH2D14 | 3.3    | 3.3    | 1.6    | 4.4    | 1.3    | 1.7    | 1.3    |
| HPWL-FRRH2D18 | 3.3    | 3.3    | 2.1    | 4.4    | 1.3    | 1.7    | 1.3    |
| HPWL-FRRH3D11 | 4.2    | 4.2    | 1.3    | 5.5    | 1.4    | 2.4    | 1.5    |
| HPWL-FRRH3D14 | 4.2    | 4.2    | 1.6    | 5.5    | 1.4    | 2.4    | 1.5    |
| HPWL-FRRH3D16 | 4.2    | 4.2    | 1.8    | 5.5    | 1.4    | 2.4    | 1.5    |

## SPECIFICATIONS

### HPWL-FRRH2D11 TYPE

| Part Number         | Inductance    | L Test Condition | Max. DC Resistance | Max. Rated Current |
|---------------------|---------------|------------------|--------------------|--------------------|
| Units               | $\mu\text{H}$ | Hz, V            | $\Omega$           | A                  |
| Symbol              | L             | -                | DCR                | $I_r$              |
| HPWL-FRRH2D11T1R2NF | 1.2 $\pm$ 30% | 100k, 0.3V       | 0.068              | 0.90               |
| HPWL-FRRH2D11T2R2NF | 2.2 $\pm$ 30% | 100k, 0.3V       | 0.098              | 0.78               |
| HPWL-FRRH2D11T3R3NF | 3.3 $\pm$ 30% | 100k, 0.3V       | 0.123              | 0.60               |
| HPWL-FRRH2D11T4R7NF | 4.7 $\pm$ 30% | 100k, 0.3V       | 0.170              | 0.50               |
| HPWL-FRRH2D11T6R8NF | 6.8 $\pm$ 30% | 100k, 0.3V       | 0.260              | 0.44               |
| HPWL-FRRH2D11T100MF | 10 $\pm$ 20%  | 1k, 0.3V         | 0.400              | 0.35               |

### HPWL-FRRH2D14 TYPE

| Part Number         | Inductance    | L Test Condition | Max. DC Resistance | Max. Rated Current |
|---------------------|---------------|------------------|--------------------|--------------------|
| Units               | $\mu\text{H}$ | Hz, V            | $\Omega$           | A                  |
| Symbol              | L             | -                | DCR                | $I_r$              |
| HPWL-FRRH2D14T1R5NF | 1.5 $\pm$ 30% | 100k, 0.3V       | 0.063              | 1.80               |

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### SPECIFICATIONS

#### HPWL-FRRH2D14 TYPE

| Part Number         | Inductance         | L Test Condition | Max. DC Resistance | Max. Rated Current |
|---------------------|--------------------|------------------|--------------------|--------------------|
|                     | $\mu\text{H}$<br>L | Hz, V<br>-       | $\Omega$<br>DCR    | A<br>Ir            |
| HPWL-FRRH2D14T1R8NF | 1.8 $\pm$ 30%      | 100k, 0.3V       | 0.075              | 1.65               |
| HPWL-FRRH2D14T2R2NF | 2.2 $\pm$ 30%      | 100k, 0.3V       | 0.094              | 1.50               |
| HPWL-FRRH2D14T2R7NF | 2.7 $\pm$ 30%      | 100k, 0.3V       | 0.106              | 1.35               |
| HPWL-FRRH2D14T3R3NF | 3.3 $\pm$ 30%      | 100k, 0.3V       | 0.125              | 1.20               |
| HPWL-FRRH2D14T3R9NF | 3.9 $\pm$ 30%      | 100k, 0.3V       | 0.138              | 1.10               |
| HPWL-FRRH2D14T4R7NF | 4.7 $\pm$ 30%      | 100k, 0.3V       | 0.169              | 1.00               |
| HPWL-FRRH2D14T5R6NF | 5.6 $\pm$ 30%      | 100k, 0.3V       | 0.188              | 0.95               |
| HPWL-FRRH2D14T6R8NF | 6.8 $\pm$ 30%      | 100k, 0.3V       | 0.213              | 0.85               |
| HPWL-FRRH2D14T8R2NF | 8.2 $\pm$ 30%      | 100k, 0.3V       | 0.281              | 0.80               |
| HPWL-FRRH2D14T100MF | 10 $\pm$ 20%       | 1k, 0.3V         | 0.294              | 0.70               |
| HPWL-FRRH2D14T120MF | 12 $\pm$ 20%       | 1k, 0.3V         | 0.394              | 0.62               |

#### HPWL-FRRH2D18 TYPE

| Part Number         | Inductance         | L Test Condition | Max. DC Resistance | Max. Rated Current |
|---------------------|--------------------|------------------|--------------------|--------------------|
|                     | $\mu\text{H}$<br>L | Hz, V<br>-       | $\Omega$<br>DCR    | A<br>Ir            |
| HPWL-FRRH2D18T2R2NF | 2.2 $\pm$ 30%      | 100k, 0.3V       | 0.041              | 0.85               |
| HPWL-FRRH2D18T3R3NF | 3.3 $\pm$ 30%      | 100k, 0.3V       | 0.054              | 0.75               |
| HPWL-FRRH2D18T4R7NF | 4.7 $\pm$ 30%      | 100k, 0.3V       | 0.078              | 0.63               |
| HPWL-FRRH2D18T6R8NF | 6.8 $\pm$ 30%      | 100k, 0.3V       | 0.106              | 0.52               |
| HPWL-FRRH2D18T100MF | 10 $\pm$ 20%       | 1k, 0.3V         | 0.180              | 0.43               |
| HPWL-FRRH2D18T150MF | 15 $\pm$ 20%       | 1k, 0.3V         | 0.220              | 0.35               |
| HPWL-FRRH2D18T220MF | 22 $\pm$ 20%       | 1k, 0.3V         | 0.320              | 0.30               |
| HPWL-FRRH2D18T330MF | 33 $\pm$ 20%       | 1k, 0.3V         | 0.460              | 0.24               |
| HPWL-FRRH2D18T470MF | 47 $\pm$ 20%       | 1k, 0.3V         | 0.660              | 0.20               |

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## Wire Wound SMD Power Inductors HPWL-DRRH Series

### SPECIFICATIONS

#### HPWL-FRRH3D11 TYPE

| Part Number         | Inductance         | L Test Condition | Max. DC Resistance | Max. Rated Current |
|---------------------|--------------------|------------------|--------------------|--------------------|
| Units<br>Symbol     | $\mu\text{H}$<br>L | Hz, V<br>-       | $\Omega$<br>DCR    | A<br>Ir            |
| HPWL-FRRH3D11T2R7NF | 2.7 $\pm$ 30%      | 100k, 0.3V       | 0.078              | 0.50               |
| HPWL-FRRH3D11T3R3NF | 3.3 $\pm$ 30%      | 100k, 0.3V       | 0.099              | 0.45               |
| HPWL-FRRH3D11T4R7NF | 4.7 $\pm$ 30%      | 100k, 0.3V       | 0.123              | 0.40               |
| HPWL-FRRH3D11T6R8NF | 6.8 $\pm$ 30%      | 100k, 0.3V       | 0.180              | 0.34               |
| HPWL-FRRH3D11T8R2NF | 8.2 $\pm$ 30%      | 100k, 0.3V       | 0.204              | 0.32               |
| HPWL-FRRH3D11T100MF | 10 $\pm$ 20%       | 1k, 0.3V         | 0.240              | 0.28               |
| HPWL-FRRH3D11T120MF | 12 $\pm$ 20%       | 1k, 0.3V         | 0.276              | 0.25               |
| HPWL-FRRH3D11T150MF | 15 $\pm$ 20%       | 1k, 0.3V         | 0.372              | 0.23               |
| HPWL-FRRH3D11T180MF | 18 $\pm$ 20%       | 1k, 0.3V         | 0.468              | 0.21               |
| HPWL-FRRH3D11T270MF | 27 $\pm$ 20%       | 1k, 0.3V         | 0.726              | 0.17               |
| HPWL-FRRH3D11T330MF | 33 $\pm$ 20%       | 1k, 0.3V         | 0.822              | 0.15               |
| HPWL-FRRH3D11T390MF | 39 $\pm$ 20%       | 1k, 0.3V         | 0.942              | 0.14               |

#### HPWL-FRRH3D14 TYPE

| Part Number         | Inductance         | L Test Condition | Max. DC Resistance | Max. Rated Current |
|---------------------|--------------------|------------------|--------------------|--------------------|
| Units<br>Symbol     | $\mu\text{H}$<br>L | Hz, V<br>-       | $\Omega$<br>DCR    | A<br>Ir            |
| HPWL-FRRH3D14T1R5NF | 1.5 $\pm$ 30%      | 100k, 0.3V       | 0.055              | 1.85               |
| HPWL-FRRH3D14T1R7NF | 1.7 $\pm$ 30%      | 100k, 0.3V       | 0.063              | 1.85               |
| HPWL-FRRH3D14T2R2NF | 2.2 $\pm$ 30%      | 100k, 0.3V       | 0.069              | 1.60               |
| HPWL-FRRH3D14T2R7NF | 2.7 $\pm$ 30%      | 100k, 0.3V       | 0.088              | 1.45               |
| HPWL-FRRH3D14T3R3NF | 3.3 $\pm$ 30%      | 100k, 0.3V       | 0.100              | 1.35               |
| HPWL-FRRH3D14T3R9NF | 3.9 $\pm$ 30%      | 100k, 0.3V       | 0.135              | 1.15               |
| HPWL-FRRH3D14T4R7NF | 4.7 $\pm$ 30%      | 100k, 0.3V       | 0.150              | 1.10               |
| HPWL-FRRH3D14T6R8NF | 6.8 $\pm$ 30%      | 100k, 0.3V       | 0.190              | 1.00               |
| HPWL-FRRH3D14T8R2NF | 8.2 $\pm$ 30%      | 100k, 0.3V       | 0.238              | 0.82               |
| HPWL-FRRH3D14T100MF | 10 $\pm$ 20%       | 1k, 0.3V         | 0.262              | 0.75               |
| HPWL-FRRH3D14T120MF | 12 $\pm$ 20%       | 1k, 0.3V         | 0.350              | 0.67               |
| HPWL-FRRH3D14T150MF | 15 $\pm$ 20%       | 1k, 0.3V         | 0.488              | 0.60               |
| HPWL-FRRH3D14T220MF | 22 $\pm$ 20%       | 1k, 0.3V         | 0.575              | 0.52               |

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## Wire Wound SMD Power Inductors HPWL-DRRH Series

### SPECIFICATIONS

#### HPWL-FRRH3D16 TYPE

| Part Number         | Inductance    | L Test Condition | Max. DC Resistance | Max. Rated Current |
|---------------------|---------------|------------------|--------------------|--------------------|
| Units               | $\mu\text{H}$ | Hz, V            | $\Omega$           | A                  |
| Symbol              | L             | -                | DCR                | Ir                 |
| HPWL-FRRH3D16T1R5NF | 1.5 $\pm$ 30% | 100k, 0.3V       | 0.052              | 1.55               |
| HPWL-FRRH3D16T2R2NF | 2.2 $\pm$ 30% | 100k, 0.3V       | 0.072              | 1.20               |
| HPWL-FRRH3D16T3R3NF | 3.3 $\pm$ 30% | 100k, 0.3V       | 0.085              | 1.10               |
| HPWL-FRRH3D16T4R7NF | 4.7 $\pm$ 30% | 100k, 0.3V       | 0.105              | 0.90               |
| HPWL-FRRH3D16T6R8NF | 6.8 $\pm$ 30% | 100k, 0.3V       | 0.170              | 0.73               |
| HPWL-FRRH3D16T8R2NF | 8.2 $\pm$ 30% | 100k, 0.3V       | 0.190              | 0.65               |
| HPWL-FRRH3D16T100MF | 10 $\pm$ 20%  | 1k, 0.3V         | 0.210              | 0.55               |
| HPWL-FRRH3D16T150MF | 15 $\pm$ 20%  | 1k, 0.3V         | 0.295              | 0.45               |
| HPWL-FRRH3D16T220MF | 22 $\pm$ 20%  | 1k, 0.3V         | 0.430              | 0.40               |
| HPWL-FRRH3D16T330MF | 33 $\pm$ 20%  | 1k, 0.3V         | 0.660              | 0.32               |

※1: All test data is referenced to 20 °C ambient;

※2: The maximum rated current is a DC current which causes initial inductance to decrease by 35% or temperature to rise by 40 °C, which is smaller(at ambient reference temperature: 20 °C)

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