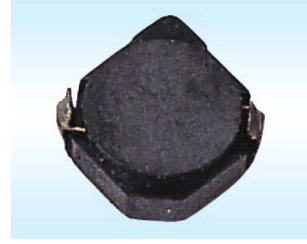


## SMD Power Inductor(HLSFD Series) 贴片功率电感 HLSFD 系列

### FEATURES 特点

- Excellent solderability and high heat resistance.  
良好的可焊性
- Low cost and packed in embossed carrier tape.  
低成本编带包装
- Magnetically shielded construction.  
磁屏蔽结构



### APPLICATIONS 应用

- Ideally used in Mobilephone,PDA,MP3,MDSC/DVC,Portable DVD, etc as DC-DC Converter.  
用于移动电话、PDA、MP3、影碟机、便携式DVD、DC-DC转换等。

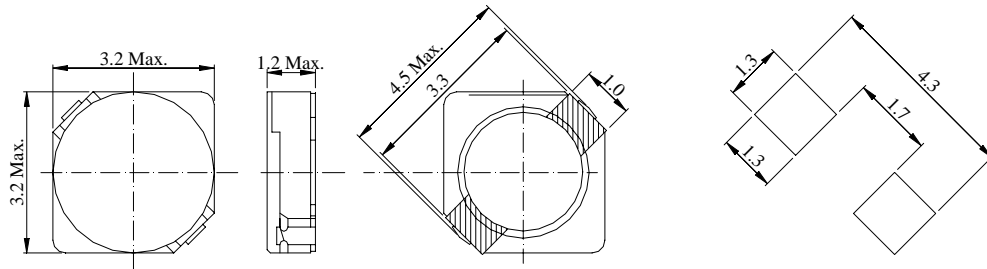
### Product Identification 产品标识

**HLSFD**    **4D28**    -    **100**    **N**    :    **LF**

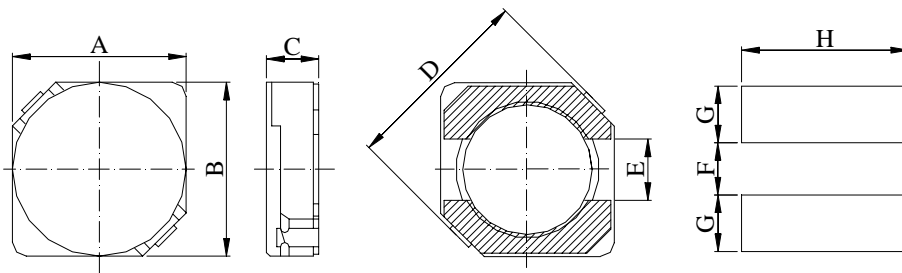
①            ②            ③            ④            ⑤

- ① Series name 系列名称
- ② Product dimensions 产品尺寸: (4.8\*4.8\*2.8 mm)
- ③ Inductance Value 电感量: (3R3:3.3uH 100:10uH; 101:100uH)
- ④ Inductance Tolerance 电感量公差: (K:10%; M:20%; N:30% or 25%)
- ⑤ Lead free products 无铅产品

### Shapes And Dimensions 外形及尺寸示意图



MGSFD2D11, MGSFD2D11HP Series



| Series    | Dimensions(mm) |        |        |        |     |     |      |     |
|-----------|----------------|--------|--------|--------|-----|-----|------|-----|
|           | A Max.         | B Max. | C Max. | D Max. | E   | F   | G    | H   |
| HLSFD4D18 | 5.0            | 5.0    | 2.0    | 6.9    | 1.5 | 1.5 | 1.9  | 5.3 |
| HLSFD4D28 | 5.0            | 5.0    | 3.0    | 6.9    | 1.5 | 1.5 | 1.9  | 5.3 |
| HLSFD5D18 | 6.0            | 6.0    | 2.0    | 8.2    | 2.0 | 2.0 | 2.15 | 6.3 |
| HLSFD5D28 | 6.0            | 6.0    | 3.0    | 8.2    | 2.0 | 2.0 | 2.15 | 6.3 |
| HLSFD6D28 | 7.0            | 7.0    | 3.0    | 9.5    | 2.0 | 2.0 | 2.65 | 7.3 |

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**Electrical Characteristics 电气性能****HLSFD2D11 Series**

| Part Number       | L±30%<br>(uH) | DCR max.<br>(Ohms) | Isat<br>(A) | Irms<br>(A) |
|-------------------|---------------|--------------------|-------------|-------------|
| HLSFD2D11-1R5N-LF | 1.5           | 0.068              | 0.90        | 1.48        |
| HLSFD2D11-2R2N-LF | 2.2           | 0.098              | 0.78        | 1.27        |
| HLSFD2D11-3R3N-LF | 3.3           | 0.123              | 0.60        | 1.02        |
| HLSFD2D11-4R7N-LF | 4.7           | 0.170              | 0.50        | 0.88        |
| HLSFD2D11-6R8N-LF | 6.8           | 0.260              | 0.44        | 0.80        |
| HLSFD2D11-100N-LF | 10.0          | 0.400              | 0.35        | 0.65        |

1. Test freq. at 100KHz.
2. Isat: DC current at which the inductance drops 35% from its value without current
3. Irms: Current that causes a 40°C temperature rise from 25°C ambient.

**HLSFD2D11HP Series**

| Part Number         | L±30%<br>(uH) | DCR max.<br>(Ohms) | Isat<br>(A) | Irms<br>(A) |
|---------------------|---------------|--------------------|-------------|-------------|
| HLSFD2D11HP-1R5N-LF | 1.5           | 0.080              | 1.35        | 1.60        |
| HLSFD2D11HP-2R2N-LF | 2.2           | 0.120              | 1.10        | 1.30        |
| HLSFD2D11HP-3R3N-LF | 3.3           | 0.173              | 0.90        | 0.90        |
| HLSFD2D11HP-4R7N-LF | 4.7           | 0.238              | 0.75        | 0.85        |
| HLSFD2D11HP-6R8N-LF | 6.8           | 0.371              | 0.63        | 0.65        |
| HLSFD2D11HP-100N-LF | 10.0          | 0.559              | 0.52        | 0.52        |

1. Test freq. at 100KHz.
  2. Isat: DC current at which the inductance drops 35% from its value without current
  3. Irms: Current that causes a 40°C temperature rise from 25°C ambient.
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**HLSFD4D18 Series**

| Part Number       | L±30%<br>(uH) | Test freq.<br>(MHz) | DCR max.<br>(Ohms) | Rated Current<br>(A) |
|-------------------|---------------|---------------------|--------------------|----------------------|
| HLSFD4D18-1R0N-LF | 1.0           | 7.96                | 0.045              | 1.72                 |
| HLSFD4D18-2R2N-LF | 2.2           | 7.96                | 0.075              | 1.32                 |
| HLSFD4D18-2R7N-LF | 2.7           | 7.96                | 0.105              | 1.28                 |
| HLSFD4D18-3R3N-LF | 3.3           | 7.96                | 0.110              | 1.04                 |
| HLSFD4D18-3R9N-LF | 3.9           | 7.96                | 0.155              | 0.88                 |
| HLSFD4D18-4R7N-LF | 4.7           | 7.96                | 0.162              | 0.84                 |
| HLSFD4D18-5R6N-LF | 5.6           | 7.96                | 0.170              | 0.80                 |
| HLSFD4D18-6R8N-LF | 6.8           | 7.96                | 0.200              | 0.76                 |
| HLSFD4D18-8R2N-LF | 8.2           | 7.96                | 0.245              | 0.68                 |
| HLSFD4D18-100N-LF | 10.0          | 0.1                 | 0.200              | 0.61                 |
| HLSFD4D18-120N-LF | 12.0          | 0.1                 | 0.210              | 0.56                 |
| HLSFD4D18-150N-LF | 15.0          | 0.1                 | 0.240              | 0.50                 |
| HLSFD4D18-180N-LF | 18.0          | 0.1                 | 0.338              | 0.48                 |
| HLSFD4D18-220N-LF | 22.0          | 0.1                 | 0.397              | 0.41                 |
| HLSFD4D18-270N-LF | 27.0          | 0.1                 | 0.441              | 0.35                 |
| HLSFD4D18-330N-LF | 33.0          | 0.1                 | 0.694              | 0.32                 |
| HLSFD4D18-390N-LF | 39.0          | 0.1                 | 0.709              | 0.30                 |
| HLSFD4D18-470N-LF | 47.0          | 0.1                 | 0.922              | 0.28                 |
| HLSFD4D18-560N-LF | 56.0          | 0.1                 | 1.080              | 0.26                 |
| HLSFD4D18-680N-LF | 68.0          | 0.1                 | 1.300              | 0.24                 |
| HLSFD4D18-820N-LF | 82.0          | 0.1                 | 1.560              | 0.22                 |
| HLSFD4D18-101N-LF | 100.0         | 0.1                 | 1.730              | 0.20                 |
| HLSFD4D18-121N-LF | 120.0         | 0.1                 | 2.390              | 0.18                 |
| HLSFD4D18-151N-LF | 150.0         | 0.1                 | 2.670              | 0.15                 |
| HLSFD4D18-181N-LF | 180.0         | 0.1                 | 4.000              | 0.14                 |

1. Rated current: It is either the inductance is 35% lower than its nominal value in D.C. saturation characteristics or temperature rise becomes  $\Delta T=40^{\circ}\text{C}$ , whichever is lower.

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HLSFD4D28 Series

| Part Number       | L±30%<br>(uH) | DCR max.<br>(Ohms) | Rated Current<br>(A) |
|-------------------|---------------|--------------------|----------------------|
| HLSFD4D28-1R2N-LF | 1.2           | 0.024              | 2.56                 |
| HLSFD4D28-1R8N-LF | 1.8           | 0.028              | 2.20                 |
| HLSFD4D28-2R2N-LF | 2.2           | 0.032              | 2.04                 |
| HLSFD4D28-2R7N-LF | 2.7           | 0.044              | 1.60                 |
| HLSFD4D28-3R3N-LF | 3.3           | 0.050              | 1.57                 |
| HLSFD4D28-3R9N-LF | 3.9           | 0.065              | 1.44                 |
| HLSFD4D28-4R7N-LF | 4.7           | 0.072              | 1.32                 |
| HLSFD4D28-5R6N-LF | 5.6           | 0.101              | 1.17                 |
| HLSFD4D28-6R8N-LF | 6.8           | 0.109              | 1.12                 |
| HLSFD4D28-8R2N-LF | 8.2           | 0.118              | 1.04                 |
| HLSFD4D28-100N-LF | 10.0          | 0.128              | 1.00                 |
| HLSFD4D28-120N-LF | 12.0          | 0.132              | 0.84                 |
| HLSFD4D28-150N-LF | 15.0          | 0.149              | 0.76                 |
| HLSFD4D28-180N-LF | 18.0          | 0.166              | 0.72                 |
| HLSFD4D28-220N-LF | 22.0          | 0.235              | 0.70                 |
| HLSFD4D28-270N-LF | 27.0          | 0.261              | 0.58                 |
| HLSFD4D28-330N-LF | 33.0          | 0.331              | 0.56                 |
| HLSFD4D28-390N-LF | 39.0          | 0.384              | 0.50                 |
| HLSFD4D28-470N-LF | 47.0          | 0.587              | 0.48                 |
| HLSFD4D28-560N-LF | 56.0          | 0.625              | 0.41                 |
| HLSFD4D28-680N-LF | 68.0          | 0.699              | 0.35                 |
| HLSFD4D28-820N-LF | 82.0          | 0.915              | 0.32                 |
| HLSFD4D28-101N-LF | 100.0         | 1.020              | 0.29                 |
| HLSFD4D28-121N-LF | 120.0         | 1.270              | 0.27                 |
| HLSFD4D28-151N-LF | 150.0         | 1.350              | 0.24                 |
| HLSFD4D28-181N-LF | 180.0         | 1.540              | 0.22                 |

1. Test freq. at 100KHz.
2. Rated current: It is either the inductance is 35% lower than its nominal value in D.C. saturation characteristics or temperature rise becomes  $\Delta T=40^{\circ}\text{C}$ , whichever is lower.

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**HLSFD5D18 Series**

| <b>Part Number</b> | <b>L±30%<br/>(uH)</b> | <b>DCR max.<br/>(Ohms)</b> | <b>Rated Current<br/>(A)</b> |
|--------------------|-----------------------|----------------------------|------------------------------|
| HLSFD5D18-4R1N-LF  | 4.1                   | 0.057                      | 1.95                         |
| HLSFD5D18-5R4N-LF  | 5.4                   | 0.076                      | 1.60                         |
| HLSFD5D18-6R2N-LF  | 6.2                   | 0.096                      | 1.40                         |
| HLSFD5D18-8R9N-LF  | 8.9                   | 0.116                      | 1.25                         |
| HLSFD5D18-100N-LF  | 10.0                  | 0.124                      | 1.20                         |
| HLSFD5D18-120N-LF  | 12.0                  | 0.153                      | 1.10                         |
| HLSFD5D18-150N-LF  | 15.0                  | 0.196                      | 0.97                         |
| HLSFD5D18-180N-LF  | 18.0                  | 0.210                      | 0.85                         |
| HLSFD5D18-220N-LF  | 22.0                  | 0.290                      | 0.80                         |
| HLSFD5D18-270N-LF  | 27.0                  | 0.330                      | 0.75                         |
| HLSFD5D18-330N-LF  | 33.0                  | 0.385                      | 0.65                         |
| HLSFD5D18-390N-LF  | 39.0                  | 0.520                      | 0.57                         |
| HLSFD5D18-470N-LF  | 47.0                  | 0.595                      | 0.54                         |
| HLSFD5D18-560N-LF  | 56.0                  | 0.665                      | 0.50                         |
| HLSFD5D18-680N-LF  | 68.0                  | 0.840                      | 0.43                         |
| HLSFD5D18-820N-LF  | 82.0                  | 0.978                      | 0.41                         |
| HLSFD5D18-101N-LF  | 100.0                 | 1.200                      | 0.36                         |

1. Test freq. at 100KHz.

2. Rated current: It is either the inductance is 35% lower than its nominal value in D.C. saturation characteristics or temperature rise becomes  $\Delta T=40^{\circ}\text{C}$ , whichever is lower.

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**HLSFD6D28 Series**

| Part Number       | L±30%<br>(uH) | DCR max.<br>(Ohms) | Rated Current<br>(A) |
|-------------------|---------------|--------------------|----------------------|
| HLSFD6D28-3R0N-LF | 3.0           | 0.024              | 3.00                 |
| HLSFD6D28-3R9N-LF | 3.9           | 0.027              | 2.60                 |
| HLSFD6D28-5R0N-LF | 5.0           | 0.031              | 2.40                 |
| HLSFD6D28-6R0N-LF | 6.0           | 0.035              | 2.25                 |
| HLSFD6D28-7R3N-LF | 7.3           | 0.054              | 2.10                 |
| HLSFD6D28-8R6N-LF | 8.6           | 0.058              | 1.85                 |
| HLSFD6D28-100N-LF | 10.0          | 0.065              | 1.70                 |
| HLSFD6D28-120N-LF | 12.0          | 0.070              | 1.55                 |
| HLSFD6D28-150N-LF | 15.0          | 0.084              | 1.40                 |
| HLSFD6D28-180N-LF | 18.0          | 0.095              | 1.32                 |
| HLSFD6D28-220N-LF | 22.0          | 0.128              | 1.20                 |
| HLSFD6D28-270N-LF | 27.0          | 0.142              | 1.05                 |
| HLSFD6D28-330N-LF | 33.0          | 0.165              | 0.97                 |
| HLSFD6D28-390N-LF | 39.0          | 0.210              | 0.86                 |
| HLSFD6D28-470N-LF | 47.0          | 0.238              | 0.80                 |
| HLSFD6D28-560N-LF | 56.0          | 0.277              | 0.73                 |
| HLSFD6D28-680N-LF | 68.0          | 0.304              | 0.65                 |
| HLSFD6D28-820N-LF | 82.0          | 0.390              | 0.60                 |
| HLSFD6D28-101N-LF | 100.0         | 0.535              | 0.54                 |

1. Test freq. at 10KHz.
2. Rated current: It is either the inductance is 35% lower than its nominal value in D.C. saturation characteristics or temperature rise becomes  $\Delta T=40^{\circ}\text{C}$ , whichever is lower.