

# Inductors for Power Circuits

Wound/STD • magnetic shielded

## VLCF series

**Type:**

- VLCF4018-2 (4.0x4.0 mm)
- VLCF4020 (4.0x4.0 mm)
- VLCF4024-2 (4.0x4.0 mm)
- VLCF4028-2 (4.0x4.0 mm)
- VLCF5020 (5.0x5.0 mm)
- VLCF5020-1 (5.0x5.0 mm)
- VLCF5020-3 (5.0x5.0 mm)
- VLCF5024-2 (5.0x5.0 mm)
- VLCF5028-2 (5.0x5.0 mm)

**Issue date:** October 2012

- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

# Inductors for Power Circuits

## Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

### VLCF Series VLCF4018-2

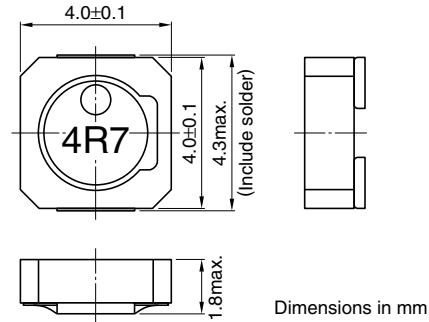
#### FEATURES

- Mount area: 4×4mm  
Low profile: 1.8mm max. height
- Generic use for portable DC to DC converter line.
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products contain no lead and also support lead-free soldering.
- It is a product conforming to RoHS directive.

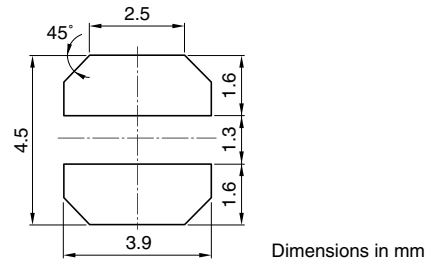
#### APPLICATIONS

Power source inductor for mobile devices such as mobile phones, HDDs, and DSCs

#### SHAPES AND DIMENSIONS



#### RECOMMENDED PC BOARD PATTERN



#### ELECTRICAL CHARACTERISTICS

| Part No.            | Inductance (μH) | Inductance tolerance(%) | Test frequency (kHz) | DC resistance(Ω) |       | Rated current(A)*               |                                |
|---------------------|-----------------|-------------------------|----------------------|------------------|-------|---------------------------------|--------------------------------|
|                     |                 |                         |                      | max.             | typ.  | Based on inductance change max. | Based on temperature rise typ. |
| VLCF4018T-1R6N1R7-2 | 1.6             | ±30                     | 100                  | 0.051            | 0.044 | 1.72                            | 2.42                           |
| VLCF4018T-2R2N1R4-2 | 2.2             | ±30                     | 100                  | 0.06             | 0.052 | 1.44                            | 2.23                           |
| VLCF4018T-3R3N1R2-2 | 3.3             | ±30                     | 100                  | 0.079            | 0.069 | 1.26                            | 1.93                           |
| VLCF4018T-4R7N1R0-2 | 4.7             | ±30                     | 100                  | 0.101            | 0.088 | 1.07                            | 1.72                           |
| VLCF4018T-6R8NR94-2 | 6.8             | ±30                     | 100                  | 0.124            | 0.108 | 0.94                            | 1.55                           |
| VLCF4018T-100MR74-2 | 10              | ±20                     | 100                  | 0.188            | 0.163 | 0.74                            | 1.26                           |
| VLCF4018T-150MR59-2 | 15              | ±20                     | 100                  | 0.268            | 0.233 | 0.59                            | 1.1                            |
| VLCF4018T-220MR49-2 | 22              | ±20                     | 100                  | 0.369            | 0.321 | 0.49                            | 0.9                            |
| VLCF4018T-330MR42-2 | 33              | ±20                     | 100                  | 0.54             | 0.469 | 0.42                            | 0.74                           |
| VLCF4018T-470MR34-2 | 47              | ±20                     | 100                  | 0.76             | 0.661 | 0.34                            | 0.62                           |

\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: -40 to +105°C (Including self-temperature rise)

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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# Inductors for Power Circuits

## Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

### VLCF Series VLCF4020

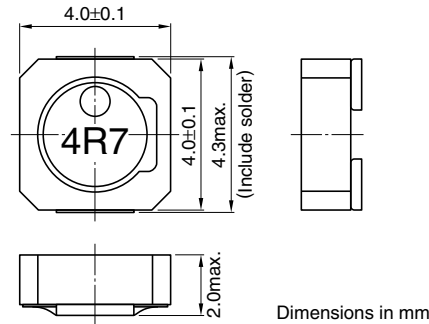
#### FEATURES

- Miniature size  
Mount area: 4×4mm  
Height: 2.0mm max.
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.

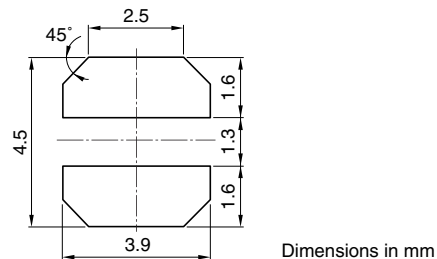
#### APPLICATIONS

DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, etc.

#### SHAPES AND DIMENSIONS



#### RECOMMENDED PC BOARD PATTERN



#### ELECTRICAL CHARACTERISTICS

| Part No.          | Inductance (μH) | Inductance tolerance(%) | Test frequency (kHz) | DC resistance(Ω) |       | Rated current(A)*               |                                |
|-------------------|-----------------|-------------------------|----------------------|------------------|-------|---------------------------------|--------------------------------|
|                   |                 |                         |                      | max.             | typ.  | Based on inductance change max. | Based on temperature rise typ. |
| VLCF4020T-1R8N1R9 | 1.8             | ±30                     | 100                  | 0.051            | 0.046 | 1.97                            | 2.37                           |
| VLCF4020T-2R2N1R7 | 2.2             | ±30                     | 100                  | 0.059            | 0.054 | 1.72                            | 2.19                           |
| VLCF4020T-3R3N1R5 | 3.3             | ±30                     | 100                  | 0.078            | 0.071 | 1.52                            | 1.94                           |
| VLCF4020T-4R7N1R2 | 4.7             | ±30                     | 100                  | 0.098            | 0.089 | 1.24                            | 1.71                           |
| VLCF4020T-6R8N1R0 | 6.8             | ±30                     | 100                  | 0.131            | 0.119 | 1.05                            | 1.47                           |
| VLCF4020T-100MR85 | 10              | ±20                     | 100                  | 0.185            | 0.168 | 0.85                            | 1.22                           |
| VLCF4020T-150MR68 | 15              | ±20                     | 100                  | 0.303            | 0.275 | 0.68                            | 1.0                            |
| VLCF4020T-220MR56 | 22              | ±20                     | 100                  | 0.431            | 0.391 | 0.56                            | 0.8                            |
| VLCF4020T-270MR48 | 27              | ±20                     | 100                  | 0.496            | 0.451 | 0.48                            | 0.8                            |
| VLCF4020T-330MR47 | 33              | ±20                     | 100                  | 0.628            | 0.571 | 0.47                            | 0.69                           |
| VLCF4020T-470MR39 | 47              | ±20                     | 100                  | 0.934            | 0.849 | 0.39                            | 0.56                           |
| VLCF4020T-101MR26 | 100             | ±20                     | 100                  | 1.4              | 1.308 | 0.26                            | 0.45                           |

\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: -40 to +105°C (Including self-temperature rise)

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# Inductors for Power Circuits

## Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

### VLCF Series VLCF4024-2

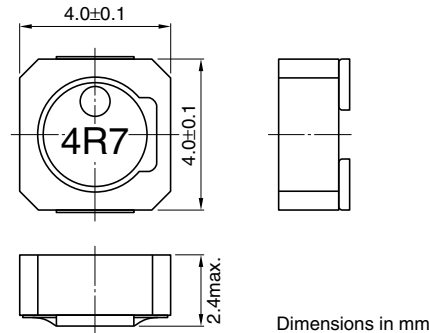
#### FEATURES

- Miniature size  
Mount area: 4×4mm  
Height: 2.4mm max.
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.

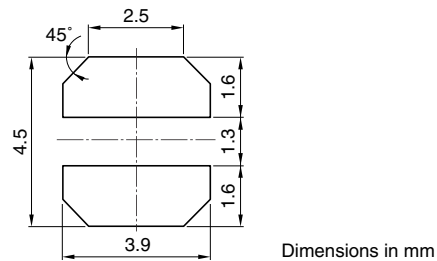
#### APPLICATIONS

DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, cellular phones, etc.

#### SHAPES AND DIMENSIONS



#### RECOMMENDED PC BOARD PATTERN



#### ELECTRICAL CHARACTERISTICS

| Part No.            | Inductance (μH) | Inductance tolerance | Test frequency (kHz) | DC resistance(Ω) |       | Rated current(A)*               |                                |
|---------------------|-----------------|----------------------|----------------------|------------------|-------|---------------------------------|--------------------------------|
|                     |                 |                      |                      | max.             | typ.  | Based on inductance change max. | Based on temperature rise typ. |
| VLCF4024T-1R2N2R4-2 | 1.2             | ±30%                 | 100                  | 0.032            | 0.027 | 2.46                            | 3.09                           |
| VLCF4024T-1R6N2R1-2 | 1.6             | ±30%                 | 100                  | 0.039            | 0.035 | 2.10                            | 2.61                           |
| VLCF4024T-2R2N1R7-2 | 2.2             | ±30%                 | 100                  | 0.043            | 0.039 | 1.76                            | 2.43                           |
| VLCF4024T-3R3N1R6-2 | 3.3             | ±30%                 | 100                  | 0.068            | 0.061 | 1.60                            | 1.96                           |
| VLCF4024T-4R7N1R4-2 | 4.7             | ±30%                 | 100                  | 0.087            | 0.075 | 1.43                            | 1.76                           |
| VLCF4024T-6R8N1R1-2 | 6.8             | ±30%                 | 100                  | 0.116            | 0.101 | 1.15                            | 1.54                           |
| VLCF4024T-100MR90-2 | 10              | ±20%                 | 100                  | 0.136            | 0.119 | 0.90                            | 1.37                           |
| VLCF4024T-150MR80-2 | 15              | ±20%                 | 100                  | 0.198            | 0.172 | 0.80                            | 1.05                           |
| VLCF4024T-220MR65-2 | 22              | ±20%                 | 100                  | 0.332            | 0.28  | 0.65                            | 0.90                           |
| VLCF4024T-330MR55-2 | 33              | ±20%                 | 100                  | 0.438            | 0.38  | 0.55                            | 0.74                           |
| VLCF4024T-470MR44-2 | 47              | ±20%                 | 100                  | 0.644            | 0.56  | 0.44                            | 0.64                           |
| VLCF4024T-101MR30-2 | 100             | ±20%                 | 100                  | 1.21             | 1.05  | 0.30                            | 0.48                           |

\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: -40 to +105°C (Including self-temperature rise)

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# Inductors for Power Circuits

## Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

### VLCF Series VLCF4028-2

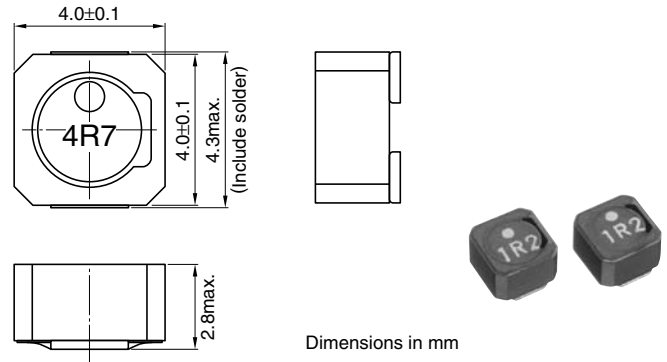
#### FEATURES

- Mount area: 4×4mm  
Low profile: 2.8mm max. height
- Generic use for portable DC to DC converter line.
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products contain no lead and also support lead-free soldering.
- It is a product conforming to RoHS directive.

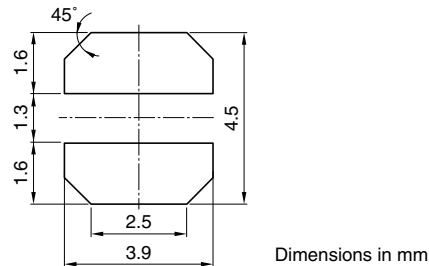
#### APPLICATIONS

Power source inductor for mobile devices such as mobile phones, HDDs, and DSCs

#### SHAPES AND DIMENSIONS



#### RECOMMENDED PC BOARD PATTERN



#### ELECTRICAL CHARACTERISTICS

| Part No.            | Inductance (μH) | Inductance tolerance(%) | Test frequency (kHz) | DC resistance(Ω) |       | Rated current(A)*               |                                |
|---------------------|-----------------|-------------------------|----------------------|------------------|-------|---------------------------------|--------------------------------|
|                     |                 |                         |                      | max.             | typ.  | Based on inductance change max. | Based on temperature rise typ. |
| VLCF4028T-1R2N2R7-2 | 1.2             | ±30                     | 100                  | 0.032            | 0.027 | 2.71                            | 3.11                           |
| VLCF4028T-1R6N2R3-2 | 1.6             | ±30                     | 100                  | 0.038            | 0.032 | 2.31                            | 2.85                           |
| VLCF4028T-2R2N1R9-2 | 2.2             | ±30                     | 100                  | 0.043            | 0.037 | 1.94                            | 2.63                           |
| VLCF4028T-2R7N1R8-2 | 2.7             | ±30                     | 100                  | 0.049            | 0.043 | 1.89                            | 2.46                           |
| VLCF4028T-4R7N1R5-2 | 4.7             | ±30                     | 100                  | 0.062            | 0.054 | 1.57                            | 2.18                           |
| VLCF4028T-6R8N1R3-2 | 6.8             | ±30                     | 100                  | 0.1              | 0.09  | 1.36                            | 1.69                           |
| VLCF4028T-100M1R0-2 | 10              | ±20                     | 100                  | 0.14             | 0.12  | 1.06                            | 1.45                           |
| VLCF4028T-150MR88-2 | 15              | ±20                     | 100                  | 0.17             | 0.15  | 0.88                            | 1.05                           |
| VLCF4028T-220MR72-2 | 22              | ±20                     | 100                  | 0.24             | 0.21  | 0.72                            | 0.9                            |
| VLCF4028T-330MR61-2 | 33              | ±20                     | 100                  | 0.35             | 0.3   | 0.61                            | 0.74                           |
| VLCF4028T-470MR48-2 | 47              | ±20                     | 100                  | 0.49             | 0.42  | 0.48                            | 0.78                           |
| VLCF4028T-101MR33-2 | 100             | ±20                     | 100                  | 1                | 0.87  | 0.33                            | 0.55                           |
| VLCF4028T-471MR14-2 | 470             | ±20                     | 100                  | 4.58             | 3.98  | 0.14                            | 0.25                           |

\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: -40 to +105°C (Including self-temperature rise)

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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# Inductors for Power Circuits

## Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

### VLCF Series VLCF5020

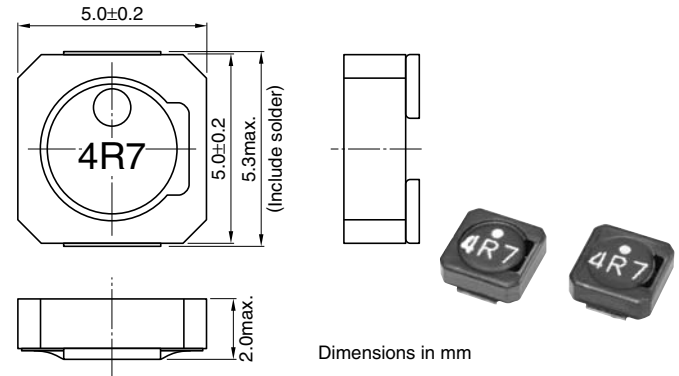
#### FEATURES

- Miniature size  
Mount area: 5×5mm  
Height: 2.0mm max.
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.

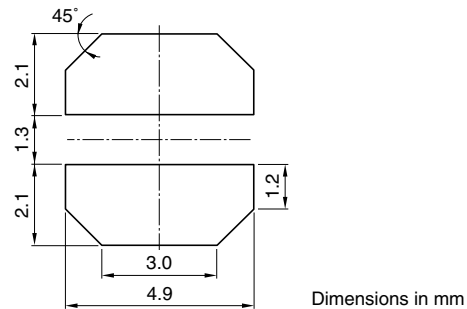
#### APPLICATIONS

DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, etc.

#### SHAPES AND DIMENSIONS



#### RECOMMENDED PC BOARD PATTERN



#### ELECTRICAL CHARACTERISTICS

| Part No.          | Inductance (μH) | Inductance tolerance | Test frequency (kHz) | DC resistance(Ω) |       | Rated current(A)*               |                                |
|-------------------|-----------------|----------------------|----------------------|------------------|-------|---------------------------------|--------------------------------|
|                   |                 |                      |                      | max.             | typ.  | Based on inductance change max. | Based on temperature rise typ. |
| VLCF5020T-1R8N2R0 | 1.8             | ±30%                 | 100                  | 0.059            | 0.049 | 2.07                            | 2.75                           |
| VLCF5020T-2R7N1R7 | 2.7             | ±30%                 | 100                  | 0.071            | 0.058 | 1.76                            | 2.51                           |
| VLCF5020T-3R3N1R6 | 3.3             | ±30%                 | 100                  | 0.083            | 0.069 | 1.6                             | 2.31                           |
| VLCF5020T-4R7N1R4 | 4.7             | ±30%                 | 100                  | 0.096            | 0.079 | 1.4                             | 2.15                           |
| VLCF5020T-6R8N1R1 | 6.8             | ±30%                 | 100                  | 0.122            | 0.102 | 1.11                            | 1.9                            |
| VLCF5020T-100MR87 | 10              | ±20%                 | 100                  | 0.182            | 0.151 | 0.87                            | 1.56                           |
| VLCF5020T-150MR71 | 15              | ±20%                 | 100                  | 0.256            | 0.214 | 0.71                            | 1.3                            |
| VLCF5020T-220MR58 | 22              | ±20%                 | 100                  | 0.373            | 0.311 | 0.58                            | 1.1                            |
| VLCF5020T-330MR48 | 33              | ±20%                 | 100                  | 0.522            | 0.435 | 0.48                            | 0.92                           |
| VLCF5020T-470MR40 | 47              | ±20%                 | 100                  | 0.748            | 0.623 | 0.40                            | 0.77                           |
| VLCF5020T-101MR27 | 100             | ±20%                 | 100                  | 1.581            | 1.375 | 0.27                            | 0.52                           |

\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: -40 to +105°C (Including self-temperature rise)

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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# Inductors for Power Circuits

## Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

### VLCF Series VLCF5020-1

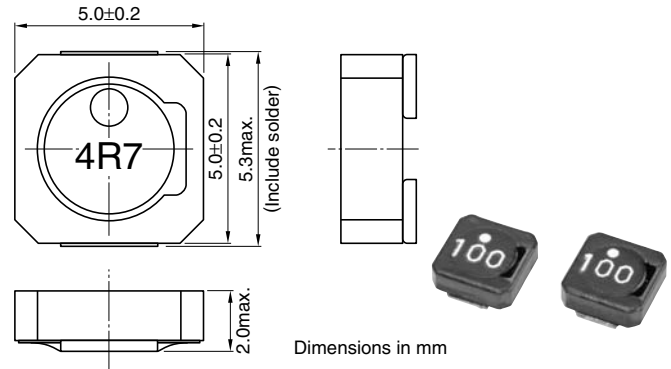
#### FEATURES

- Miniature size  
Mount area: 5×5mm  
Height: 2.0mm max.
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.

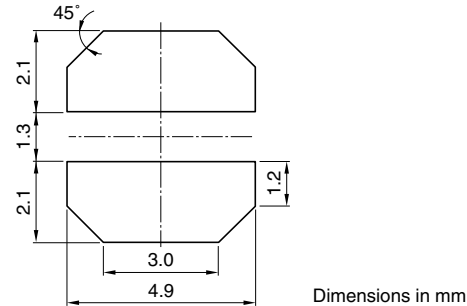
#### APPLICATIONS

DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, etc.

#### SHAPES AND DIMENSIONS



#### RECOMMENDED PC BOARD PATTERN



#### ELECTRICAL CHARACTERISTICS

| Part No.            | Inductance (μH) | Inductance tolerance | Test frequency (kHz) | DC resistance(Ω) |       | Rated current(A)*               |                                |
|---------------------|-----------------|----------------------|----------------------|------------------|-------|---------------------------------|--------------------------------|
|                     |                 |                      |                      | max.             | typ.  | Based on inductance change max. | Based on temperature rise typ. |
| VLCF5020T-2R2N2R6-1 | 2.2             | ±30%                 | 100                  | 0.071            | 0.058 | 2.62                            | 2.76                           |
| VLCF5020T-2R7N2R2-1 | 2.7             | ±30%                 | 100                  | 0.083            | 0.069 | 2.28                            | 2.55                           |
| VLCF5020T-3R3N2R0-1 | 3.3             | ±30%                 | 100                  | 0.096            | 0.079 | 2.02                            | 2.37                           |
| VLCF5020T-4R7N1R7-1 | 4.7             | ±30%                 | 100                  | 0.122            | 0.102 | 1.7                             | 2.09                           |
| VLCF5020T-6R8N1R3-1 | 6.8             | ±30%                 | 100                  | 0.165            | 0.138 | 1.39                            | 1.8                            |
| VLCF5020T-100M1R1-1 | 10              | ±20%                 | 100                  | 0.237            | 0.198 | 1.13                            | 1.5                            |
| VLCF5020T-150MR90-1 | 15              | ±20%                 | 100                  | 0.35             | 0.292 | 0.90                            | 1.2                            |
| VLCF5020T-220MR75-1 | 22              | ±20%                 | 100                  | 0.496            | 0.413 | 0.75                            | 1.0                            |
| VLCF5020T-330MR62-1 | 33              | ±20%                 | 100                  | 0.717            | 0.597 | 0.62                            | 0.86                           |
| VLCF5020T-470MR51-1 | 47              | ±20%                 | 100                  | 1.05             | 0.875 | 0.51                            | 0.71                           |

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- Operating temperature range: -40 to +105°C (Including self-temperature rise)

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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# Inductors for Power Circuits

## Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

### VLCF Series VLCF5020-3

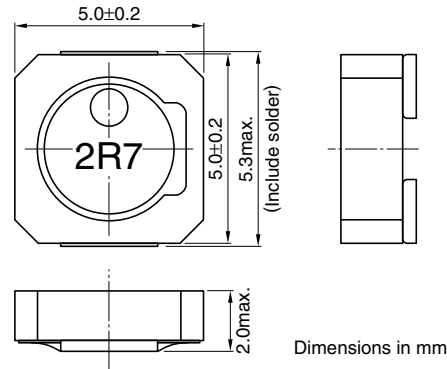
#### FEATURES

- Miniature size  
Mount area: 5×5mm  
Height: 2.0mm max.
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products contain no lead and also support lead-free soldering.

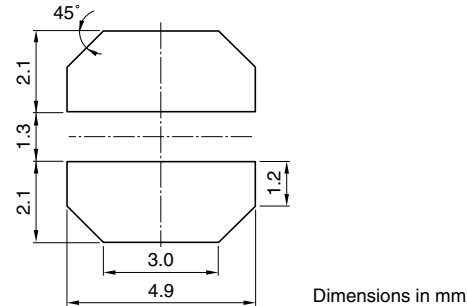
#### APPLICATIONS

DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, cellular phones, etc.

#### SHAPES AND DIMENSIONS



#### RECOMMENDED PC BOARD PATTERN



#### ELECTRICAL CHARACTERISTICS

| Part No.            | Inductance (μH) | Inductance tolerance | Test frequency (kHz) | DC resistance(Ω) |       | Rated current(A)*               |                                |
|---------------------|-----------------|----------------------|----------------------|------------------|-------|---------------------------------|--------------------------------|
|                     |                 |                      |                      | max.             | typ.  | Based on inductance change max. | Based on temperature rise typ. |
| VLCF5020T-2R2N2R6-3 | 2.2             | ±30%                 | 100                  | 0.043            | 0.038 | 2.62                            | 3.25                           |
| VLCF5020T-2R7N2R2-3 | 2.7             | ±30%                 | 100                  | 0.054            | 0.046 | 2.28                            | 2.98                           |
| VLCF5020T-3R3N2R0-3 | 3.3             | ±30%                 | 100                  | 0.065            | 0.055 | 2.02                            | 2.76                           |

\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: -40 to +105°C (Including self-temperature rise)

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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# Inductors for Power Circuits

## Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

### VLCF Series VLCF5024-2

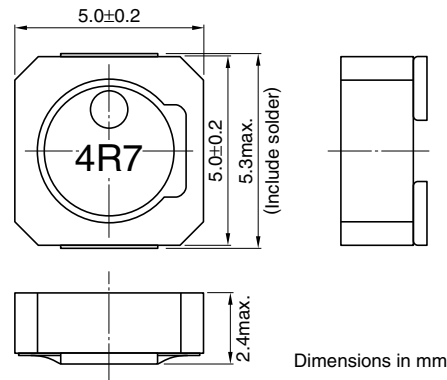
#### FEATURES

- Miniature size  
Mount area: 5×5mm  
Height: 2.4mm max.
- Generic use for portable DC to DC converter line
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.

#### APPLICATIONS

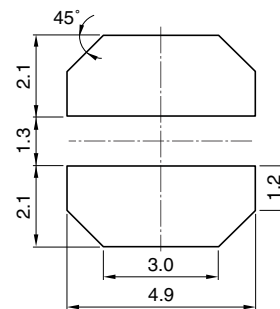
DC to DC converters for DVC, DSC, PDA, MD, LCD displays, HDDs, etc.

#### SHAPES AND DIMENSIONS



Dimensions in mm

#### RECOMMENDED PC BOARD PATTERN



Dimensions in mm



#### ELECTRICAL CHARACTERISTICS

| Part No.            | Inductance (μH) | Inductance tolerance | Test frequency (kHz) | DC resistance(Ω) |       | Rated current(A)*               |                                |
|---------------------|-----------------|----------------------|----------------------|------------------|-------|---------------------------------|--------------------------------|
|                     |                 |                      |                      | max.             | typ.  | Based on inductance change max. | Based on temperature rise typ. |
| VLCF5024T-1R8N1R8-2 | 1.8             | ±30%                 | 100                  | 0.026            | 0.022 | 1.86                            | 4.05                           |
| VLCF5024T-2R7N1R5-2 | 2.7             | ±30%                 | 100                  | 0.031            | 0.027 | 1.53                            | 3.67                           |
| VLCF5024T-3R3N1R4-2 | 3.3             | ±30%                 | 100                  | 0.037            | 0.032 | 1.46                            | 3.37                           |
| VLCF5024T-4R7N1R3-2 | 4.7             | ±30%                 | 100                  | 0.044            | 0.038 | 1.33                            | 3.11                           |
| VLCF5024T-6R8N1R1-2 | 6.8             | ±30%                 | 100                  | 0.061            | 0.053 | 1.11                            | 2.62                           |
| VLCF5024T-100MR88-2 | 10              | ±20%                 | 100                  | 0.092            | 0.080 | 0.88                            | 2.14                           |
| VLCF5024T-150MR71-2 | 15              | ±20%                 | 100                  | 0.152            | 0.133 | 0.71                            | 1.66                           |
| VLCF5024T-220MR59-2 | 22              | ±20%                 | 100                  | 0.188            | 0.164 | 0.59                            | 1.50                           |
| VLCF5024T-330MR50-2 | 33              | ±20%                 | 100                  | 0.275            | 0.239 | 0.50                            | 1.24                           |
| VLCF5024T-470MR40-2 | 47              | ±20%                 | 100                  | 0.383            | 0.333 | 0.40                            | 1.05                           |
| VLCF5024T-101MR28-2 | 100             | ±20%                 | 100                  | 0.838            | 0.762 | 0.28                            | 0.72                           |

\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: -40 to +105°C (Including self-temperature rise)

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

# Inductors for Power Circuits

## Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

### VLCF Series VLCF5028-2

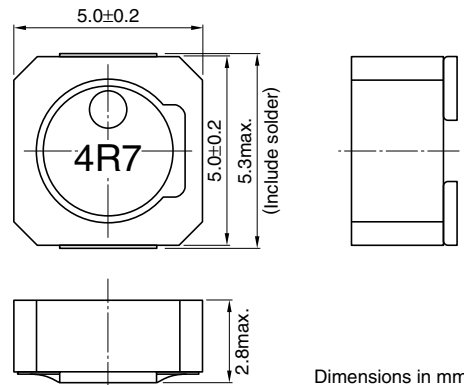
#### FEATURES

- Miniature size  
Mount area: 5×5mm  
Height: 2.8mm max.
- Generic use for portable DC to DC converter line.
- High magnetic shield construction should actualize high resolution for EMC protection.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.

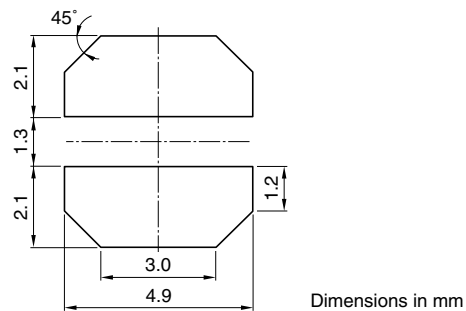
#### APPLICATIONS

DC to DC converters for DVCs, DSCs, PDAs, MDs, LCD displays, HDDs, etc.

#### SHAPES AND DIMENSIONS



#### RECOMMENDED PC BOARD PATTERN



#### ELECTRICAL CHARACTERISTICS

| Part No.            | Inductance (μH) | Inductance tolerance(%) | Test frequency (kHz) | DC resistance(Ω) |       | Rated current(A)*               |                                |
|---------------------|-----------------|-------------------------|----------------------|------------------|-------|---------------------------------|--------------------------------|
|                     |                 |                         |                      | max.             | typ.  | Based on inductance change max. | Based on temperature rise typ. |
| VLCF5028T-1R3N2R5-2 | 1.3             | ±30                     | 100                  | 0.022            | 0.019 | 2.56                            | 4.32                           |
| VLCF5028T-1R8N2R2-2 | 1.8             | ±30                     | 100                  | 0.028            | 0.023 | 2.22                            | 3.88                           |
| VLCF5028T-2R7N1R8-2 | 2.7             | ±30                     | 100                  | 0.033            | 0.028 | 1.82                            | 3.53                           |
| VLCF5028T-3R3N1R7-2 | 3.3             | ±30                     | 100                  | 0.037            | 0.032 | 1.74                            | 3.26                           |
| VLCF5028T-4R7N1R5-2 | 4.7             | ±30                     | 100                  | 0.043            | 0.038 | 1.58                            | 3.03                           |
| VLCF5028T-6R8N1R3-2 | 6.8             | ±30                     | 100                  | 0.056            | 0.048 | 1.32                            | 2.67                           |
| VLCF5028T-100M1R0-2 | 10              | ±20                     | 100                  | 0.083            | 0.072 | 1.05                            | 2.19                           |
| VLCF5028T-150MR85-2 | 15              | ±20                     | 100                  | 0.12             | 0.1   | 0.85                            | 1.85                           |
| VLCF5028T-220MR71-2 | 22              | ±20                     | 100                  | 0.14             | 0.13  | 0.71                            | 1.66                           |
| VLCF5028T-330MR62-2 | 33              | ±20                     | 100                  | 0.24             | 0.21  | 0.62                            | 1.3                            |
| VLCF5028T-470MR49-2 | 47              | ±20                     | 100                  | 0.33             | 0.29  | 0.49                            | 1.1                            |
| VLCF5028T-560MR43-2 | 56              | ±20                     | 100                  | 0.41             | 0.36  | 0.43                            | 0.98                           |
| VLCF5028T-680MR40-2 | 68              | ±20                     | 100                  | 0.46             | 0.4   | 0.4                             | 0.93                           |
| VLCF5028T-101MR33-2 | 100             | ±20                     | 100                  | 0.67             | 0.58  | 0.33                            | 0.77                           |
| VLCF5028T-221MR22-2 | 220             | ±20                     | 100                  | 1.38             | 1.2   | 0.22                            | 0.54                           |
| VLCF5028T-471MR14-2 | 470             | ±20                     | 100                  | 3.12             | 2.71  | 0.14                            | 0.35                           |

\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: -40 to +105°C (Including self-temperature rise)

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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