

# SMD Inductors(Coils) For Power Line(Wound, Magnetic Shielded)

**Conformity to RoHS Directive** 

# VLF Series VLF4012A-2

#### **FEATURES**

· Miniature size

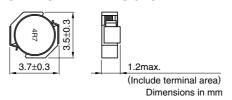
Mount area: 3.5×3.7mm Low profile: 1.2mm max. height

- 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 real package.
- The products do not contain lead and support lead-free soldering

#### **APPLICATIONS**

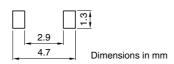
DVCs, DSCs, PDAs, LCD displays, Cellular phones, HDDs, etc.

#### SHAPES AND DIMENSIONS





#### RECOMMENDED PC BOARD PATTERN



#### **ELECTRICAL CHARACTERISTICS**

| Part No.            | Inductance<br>(µH) | Inductance<br>tolerance(%) | Test frequency<br>(kHz) | DC resistance( $\Omega$ ) |       | Rated current(A)*               |                                |
|---------------------|--------------------|----------------------------|-------------------------|---------------------------|-------|---------------------------------|--------------------------------|
|                     |                    |                            |                         | max.                      | typ.  | Based on inductance change max. | Based on temperature rise typ. |
| VLF4012AT-3R3M1R0-2 | 3.3                | ±20                        | 100                     | 0.11                      | 0.095 | 1.0                             | 1.4                            |
| VLF4012AT-4R7MR82-2 | 4.7                | ±20                        | 100                     | 0.15                      | 0.12  | 0.82                            | 1.2                            |
| VLF4012AT-6R8MR74-2 | 6.8                | ±20                        | 100                     | 0.20                      | 0.17  | 0.74                            | 1.0                            |
| VLF4012AT-100MR50-2 | 10                 | ±20                        | 100                     | 0.23                      | 0.20  | 0.5                             | 0.97                           |

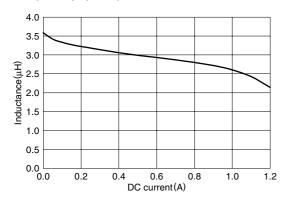
<sup>\*</sup> Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

<sup>•</sup> Operating temperature range: -40 to +105°C (Including self-temperature rise)

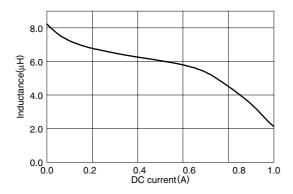
<sup>•</sup> Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.



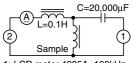
# TYPICAL ELECTRICAL CHARACTERISTICS INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS VLF4012AT-3R3M1R0-2



# VLF4012AT-6R8MR74-2

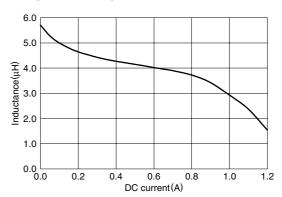


# **TEST CIRCUIT**



1: LCR meter 4285A=100kHz 2: DC constant current

#### VLF4012AT-4R7MR82-2



### VLF4012AT-100MR50-2

