



**THE DATASHEET OF
VLF4012ST-3R3M1R1**



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

Conformity to RoHS Directive

VLF Series VLF4012S

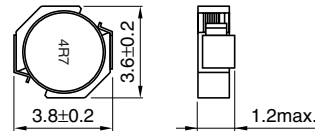
FEATURES

- Miniature size
Mount area: 3.6×3.8mm
Height: 1.2mm 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

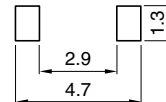
DVCs, DSCs, PDAs, LCD displays, cellular phones, HDDs, etc.

SHAPES AND DIMENSIONS



Dimensions in mm

RECOMMENDED PC BOARD PATTERN



Dimensions in mm

ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (μH) | Inductance tolerance(%) | Test frequency (MHz) | DC resistance(Ω) | | Rated current(A)* | |
|-------------------|-----------------|-------------------------|----------------------|------------------|-------|---------------------------------|--------------------------------|
| | | | | max. | typ. | Based on inductance change max. | Based on temperature rise typ. |
| VLF4012ST-1R0N1R9 | 1 | ±30 | 1 | 0.054 | 0.045 | 2.7 | 1.9 |
| VLF4012ST-2R2M1R3 | 2.2 | ±20 | 1 | 0.12 | 0.097 | 1.7 | 1.3 |
| VLF4012ST-3R3M1R1 | 3.3 | ±20 | 1 | 0.16 | 0.13 | 1.5 | 1.1 |
| VLF4012ST-4R7M1R0 | 4.7 | ±20 | 1 | 0.19 | 0.16 | 1.4 | 1 |
| VLF4012ST-6R8MR80 | 6.8 | ±20 | 1 | 0.32 | 0.27 | 1 | 0.8 |
| VLF4012ST-100MR65 | 10 | ±20 | 1 | 0.49 | 0.41 | 0.9 | 0.65 |

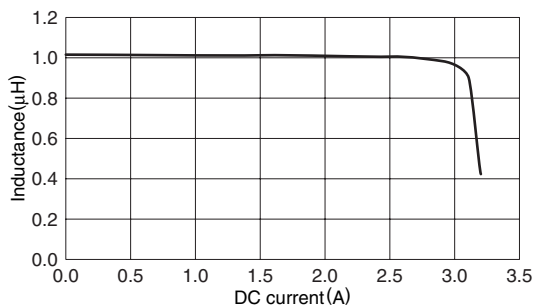
* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

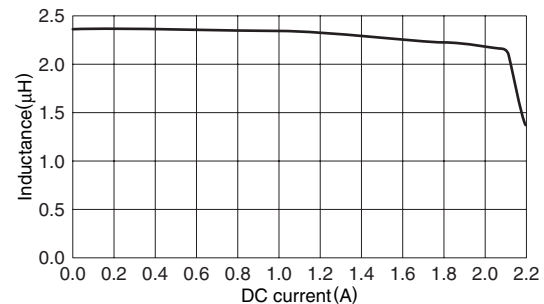
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

VLF4012ST-1R0N1R9



VLF4012ST-2R2M1R3



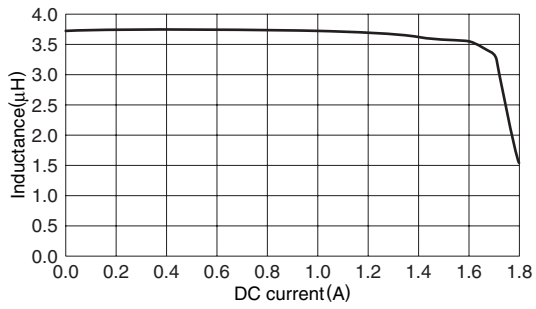
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

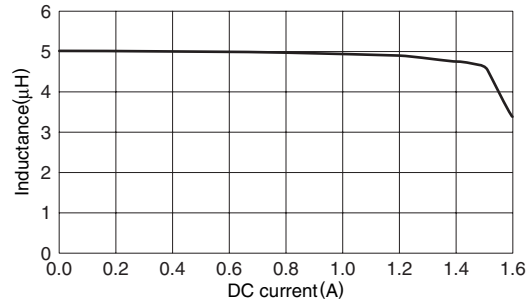
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

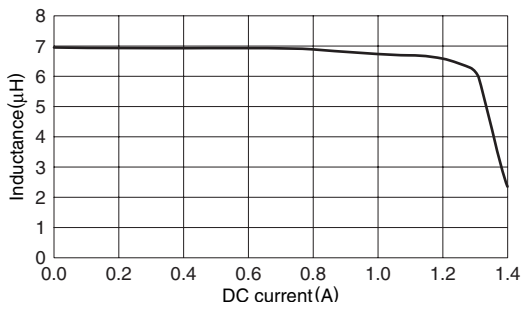
VLF4012ST-3R3M1R1



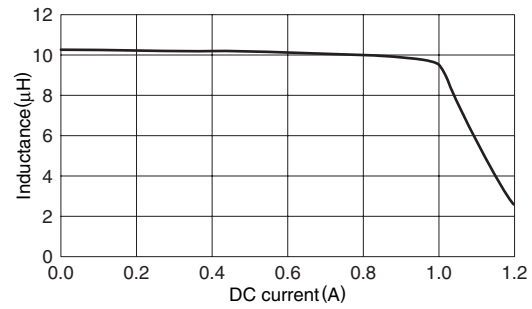
VLF4012ST-4R7M1R0



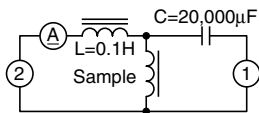
VLF4012ST-6R8MR80



VLF4012ST-100MR65





TEST CIRCUIT



- 1: LCR meter 4285A $f=1MHz$
 2: DC constant current

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-  [TDK Corporation Information](#)

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