

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

Conformity to RoHS Directive

## VLF Series VLF5012S

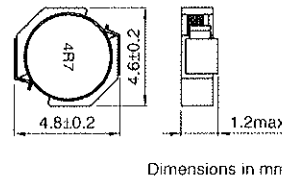
### FEATURES

- Miniature size  
Mount area: 4.6×4.8mm  
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 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

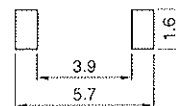
### SHAPES AND DIMENSIONS



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.
VLF5012ST-1R0N2R5	1	±30	1	0.05	0.042	3.3	2.5
VLF5012ST-2R2M2R0	2.2	±20	1	0.083	0.069	2.4	2
VLF5012ST-3R3M1R7	3.3	±20	1	0.12	0.095	2	1.7
VLF5012ST-4R7M1R4	4.7	±20	1	0.16	0.13	1.7	1.4
VLF5012ST-6R8M1R2	6.8	±20	1	0.22	0.18	1.4	1.2
VLF5012ST-100M1R0	10	±20	1	0.29	0.24	1.2	1

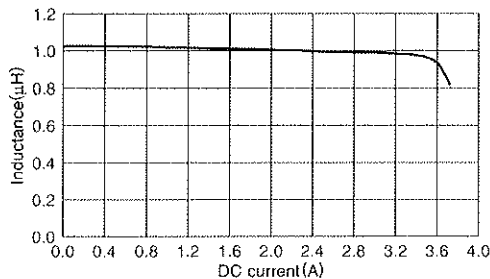
\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

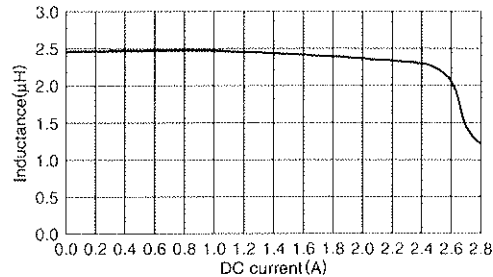
### TYPICAL ELECTRICAL CHARACTERISTICS

#### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

##### VLF5012ST-1R0N2R5



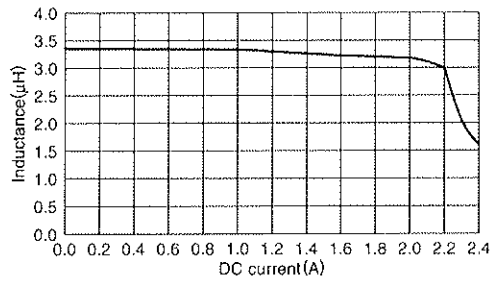
##### VLF5012ST-2R2M2R0



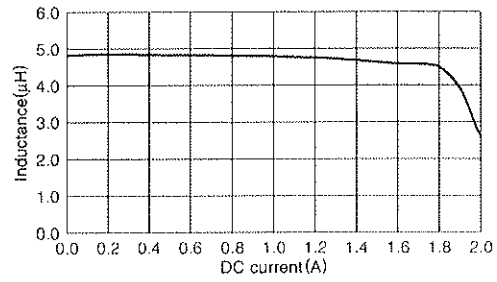
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.

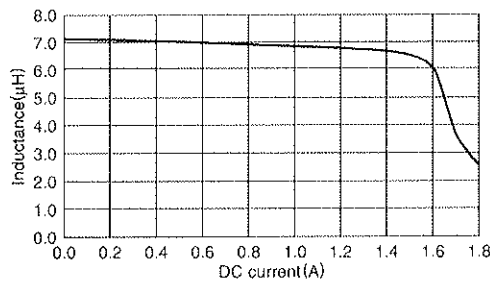
**TYPICAL ELECTRICAL CHARACTERISTICS**  
**INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS**  
**VLF5012ST-3R3M1R7**



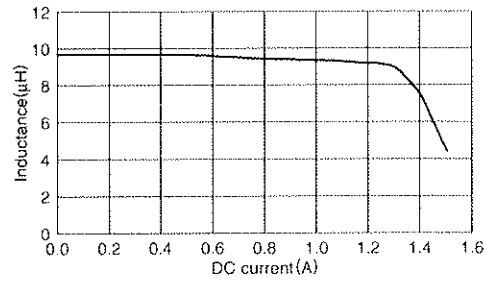
**VLF5012ST-4R7M1R4**



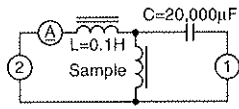
**VLF5012ST-6R8M1R2**



**VLF5012ST-100M1R0**



**TEST CIRCUIT**



1: LCR meter 4285A  $f=1\text{MHz}$   
 2: DC constant current