

# SMD Inductors(Coils)

## For Power Line(Wound, Magnetic Shielded)

Conformity to RoHS Directive

### VLF Series VLF5010S

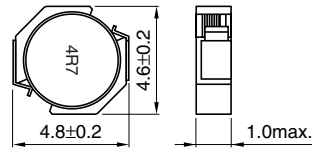
#### FEATURES

- Miniature size  
Mount area: 4.6×4.8mm  
Height: 1.0mm 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

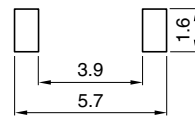
DVCs, DSCs, PDAs, LCD displays, cellular phones, HDDs, etc.

#### 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.
VLF5010ST-1R0N2R5	1	±30	1	0.054	0.045	2.7	2.5
VLF5010ST-2R2M2R0	2.2	±20	1	0.077	0.064	2	2
VLF5010ST-3R3M1R4	3.3	±20	1	0.16	0.13	1.6	1.4
VLF5010ST-4R7M1R3	4.7	±20	1	0.18	0.15	1.4	1.3
VLF5010ST-6R8M1R1	6.8	±20	1	0.24	0.2	1.1	1.2
VLF5010ST-100MR94	10	±20	1	0.37	0.31	1	0.94

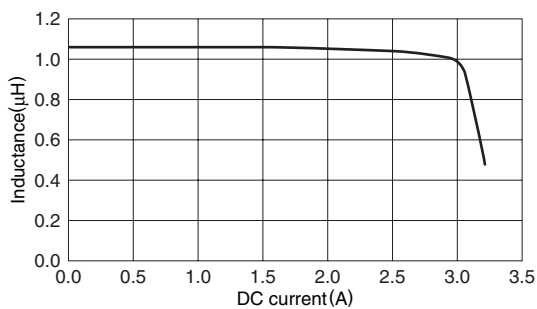
\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

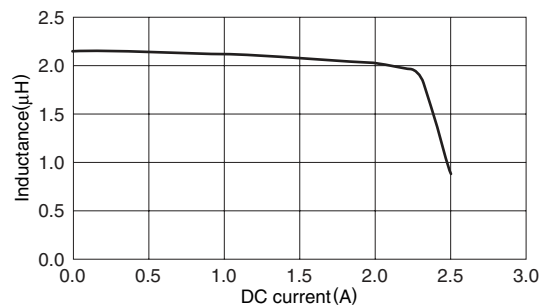
#### TYPICAL ELECTRICAL CHARACTERISTICS

##### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

###### VLF5010ST-1R0N2R5



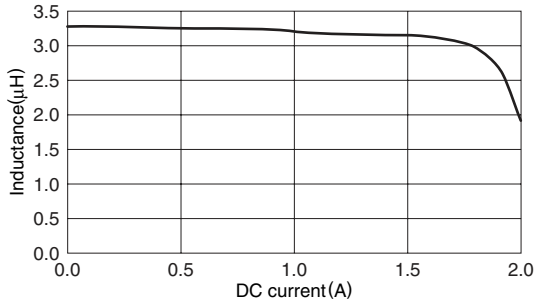
###### VLF5010ST-2R2M2R0



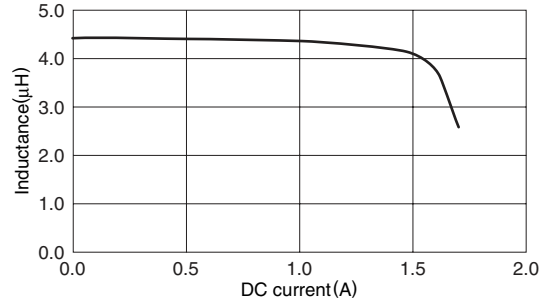
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.

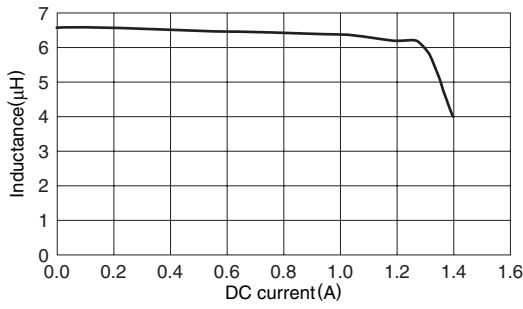
**TYPICAL ELECTRICAL CHARACTERISTICS**  
**INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS**  
**VLF5010ST-3R3M1R4**



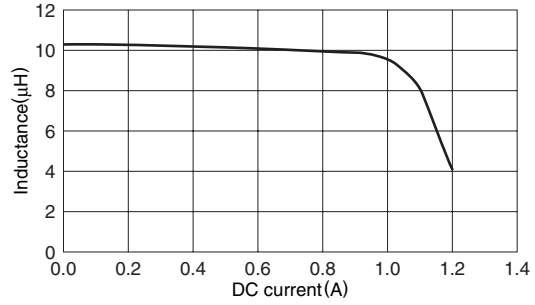
**VLF5010ST-4R7M1R3**



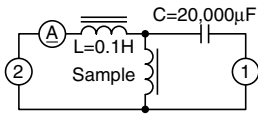
**VLF5010ST-6R8M1R1**



**VLF5010ST-100MR94**



**TEST CIRCUIT**



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