

# SMD Inductors(Coils)

## For Power Line(Wound, Magnetic Shielded)

Conformity to RoHS Directive

### VLF Series VLF4012A

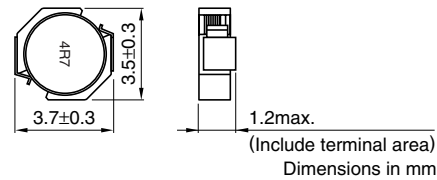
#### FEATURES

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

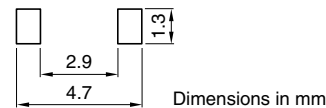
#### APPLICATIONS

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

#### SHAPES AND DIMENSIONS



#### 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.
VLF4012AT-1R5M1R6	1.5	±20	100	0.079	0.069	1.8	1.6
VLF4012AT-2R2M1R5	2.2	±20	100	0.087	0.076	1.5	1.5
VLF4012AT-3R3M1R3	3.3	±20	100	0.12	0.1	1.3	1.3
VLF4012AT-4R7M1R1	4.7	±20	100	0.16	0.14	1.1	1.1
VLF4012AT-6R8MR96	6.8	±20	100	0.23	0.2	0.96	0.97
VLF4012AT-100MR79	10	±20	100	0.35	0.3	0.80	0.79
VLF4012AT-150MR63	15	±20	100	0.53	0.46	0.63	0.64
VLF4012AT-220MR51	22	±20	100	0.82	0.71	0.52	0.51
VLF4012AT-330MR39	33	±20	100	1.4	1.2	0.44	0.39
VLF4012AT-470MR30	47	±20	100	2.3	2.0	0.36	0.30

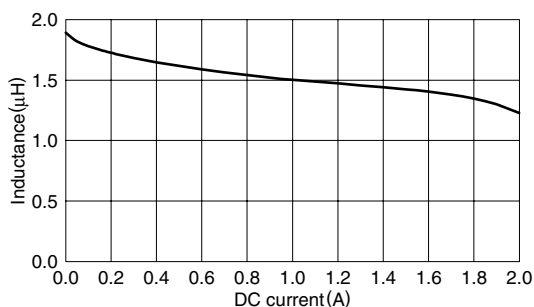
\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

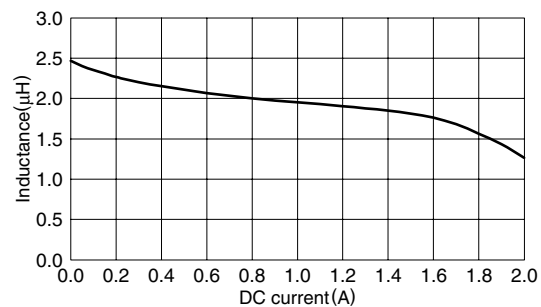
#### TYPICAL ELECTRICAL CHARACTERISTICS

##### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

###### VLF4012AT-1R5M1R6



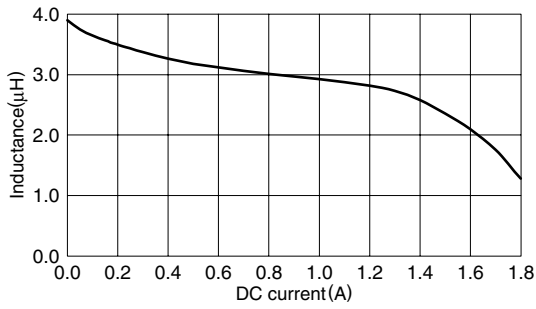
###### VLF4012AT-2R2M1R5



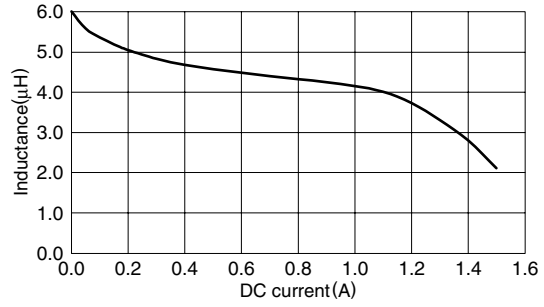
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.

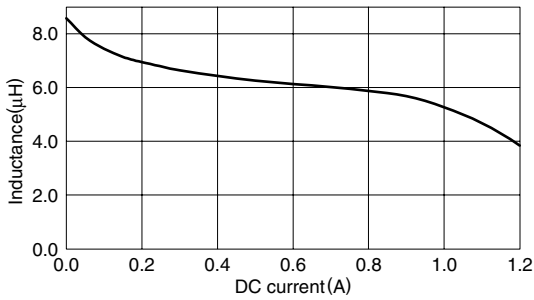
**TYPICAL ELECTRICAL CHARACTERISTICS**  
**INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS**  
**VLF4012AT-3R3M1R3**



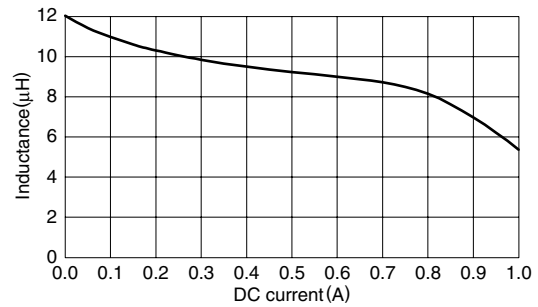
**VLF4012AT-4R7M1R1**



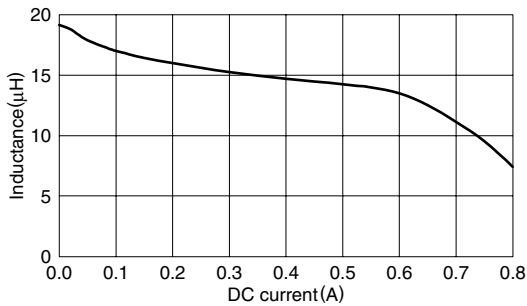
**VLF4012AT-6R8MR96**



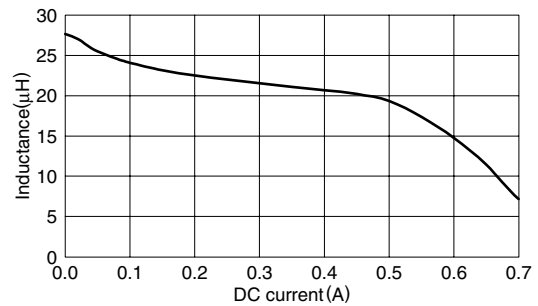
**VLF4012AT-100MR79**



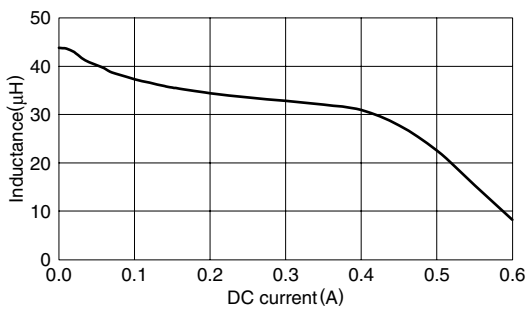
**VLF4012AT-150MR63**



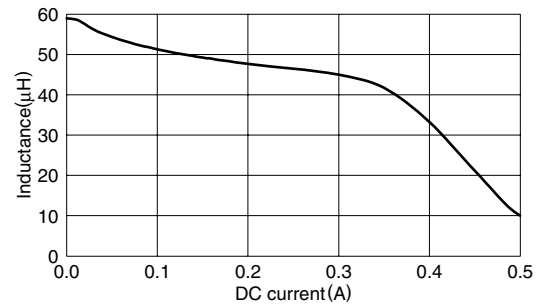
**VLF4012AT-220MR51**



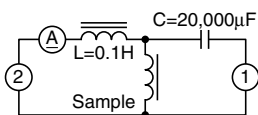
**VLF4012AT-330MR39**



**VLF4012AT-470MR30**



**TEST CIRCUIT**



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