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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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

Conformity to RoHS Directive

## VLF Series VLF4012A

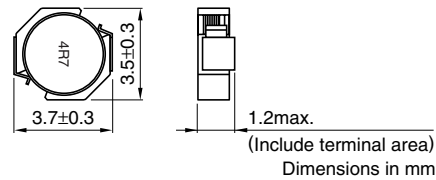
### FEATURES

- 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 contain no lead and also support lead-free soldering.
- It is a product conforming to RoHS directive.

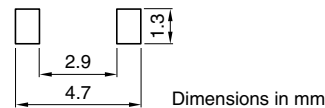
### APPLICATIONS

Power source inductor for mobile devices such as mobile phones, HDDs, and DSCs

### SHAPES AND DIMENSIONS



### RECOMMENDED PC BOARD PATTERN



### ELECTRICAL CHARACTERISTICS

Part No.	Inductance [at 1/2 I <sub>dc1</sub> ] <sup>*2</sup> (μH)	Inductance tolerance(%)	Test frequency (kHz)	DC resistance(Ω)		Rated current <sup>*1</sup> (A)	
				max.	typ.	Based on inductance change I <sub>dc</sub> max.	Based on temperature rise I <sub>dc2</sub> 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

<sup>\*1</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.

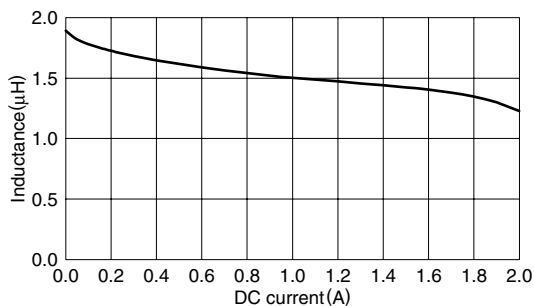
<sup>\*2</sup> Inductance is at 1/2 I<sub>dc1</sub> power distribution. The L value at 0A is higher than the guaranteed performance.

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

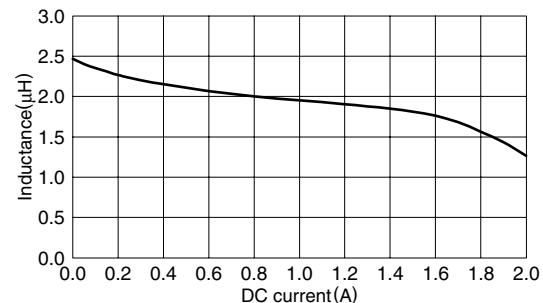
### TYPICAL ELECTRICAL CHARACTERISTICS

#### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

##### VLF4012AT-1R5M1R6



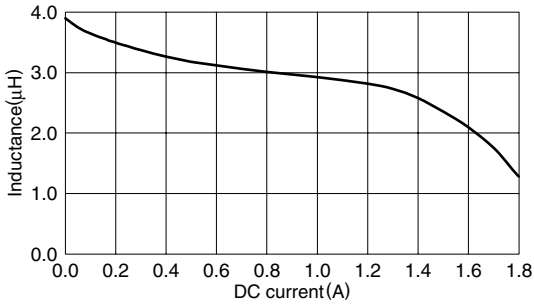
##### VLF4012AT-2R2M1R5



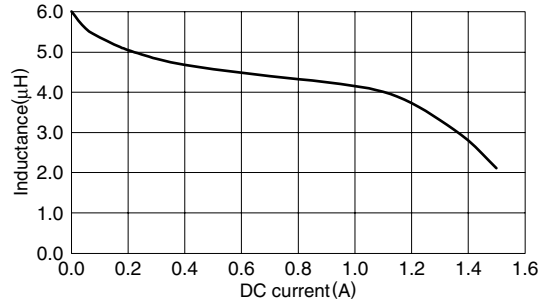
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

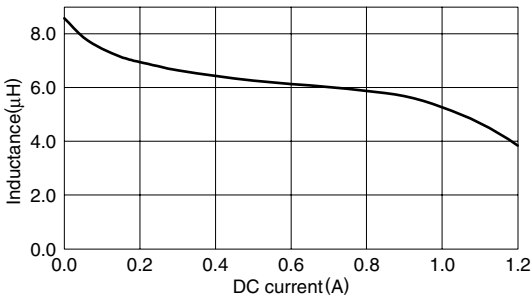
**TYPICAL ELECTRICAL CHARACTERISTICS**  
**INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS**  
**VLF4012AT-3R3M1R3**



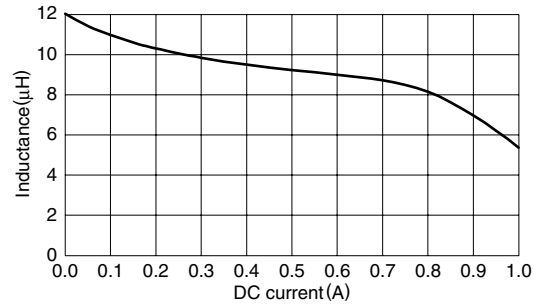
**VLF4012AT-4R7M1R1**



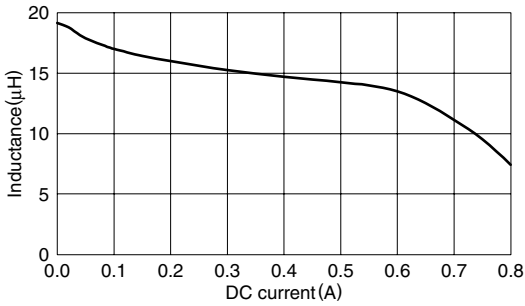
**VLF4012AT-6R8MR96**



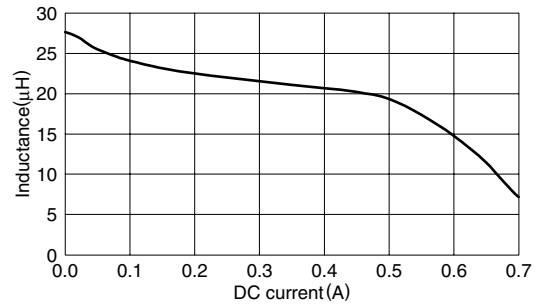
**VLF4012AT-100MR79**



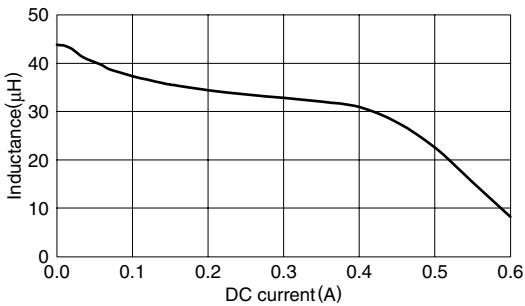
**VLF4012AT-150MR63**



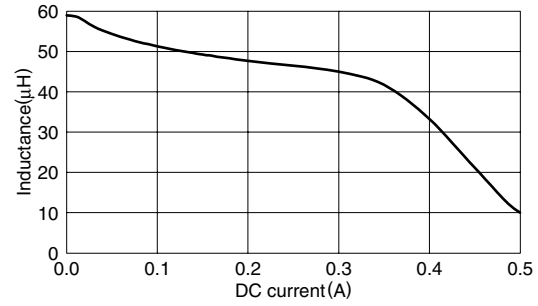
**VLF4012AT-220MR51**



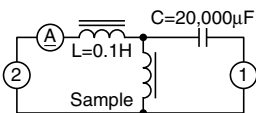
**VLF4012AT-330MR39**



**VLF4012AT-470MR30**



**TEST CIRCUIT**



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