

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

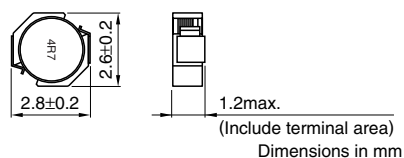
Conformity to RoHS Directive

## VLF Series VLF3012A

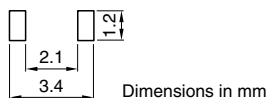
### FEATURES

- Miniature size  
Mount area: 2.6×2.8mm  
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.

### SHAPES AND DIMENSIONS



### RECOMMENDED PC BOARD PATTERN



### APPLICATIONS

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

### 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>dc1</sub> max.	Based on temperature rise I <sub>dc2</sub> typ.
VLF3012AT-1R5N1R2	1.5	±30	100	0.068	0.059	1.2	1.6
VLF3012AT-2R2M1R0	2.2	±20	100	0.1	0.088	1.0	1.3
VLF3012AT-3R3MR87	3.3	±20	100	0.13	0.11	0.87	1.2
VLF3012AT-4R7MR74	4.7	±20	100	0.19	0.16	0.74	0.98
VLF3012AT-6R8MR59	6.8	±20	100	0.27	0.23	0.59	0.83
VLF3012AT-100MR49	10	±20	100	0.41	0.36	0.49	0.67
VLF3012AT-150MR41	15	±20	100	0.62	0.54	0.41	0.54
VLF3012AT-220MR33	22	±20	100	0.76	0.66	0.33	0.49
VLF3012AT-330MR27	33	±20	100	1.3	1.1	0.27	0.38
VLF3012AT-470MR22	47	±20	100	2.2	1.9	0.22	0.29

<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.

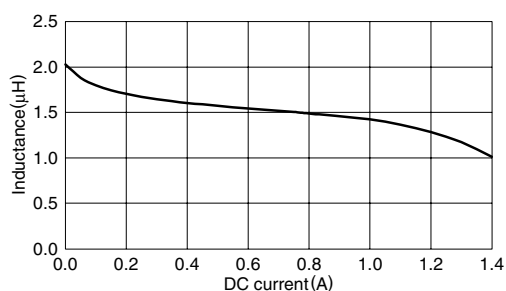
<sup>\*2</sup> Inductance is at 1/2 I<sub>dc1</sub> power distribution. The L value at 0A is higher than the guaranteed performance.

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

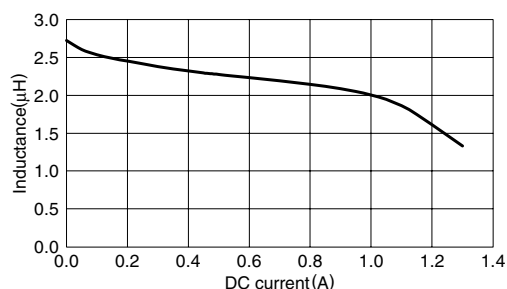
### TYPICAL ELECTRICAL CHARACTERISTICS

#### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

##### VLF3012AT-1R5N1R2



##### VLF3012AT-2R2M1R0

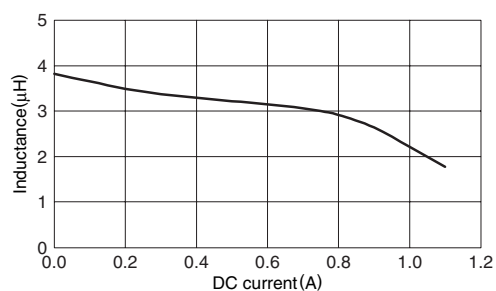
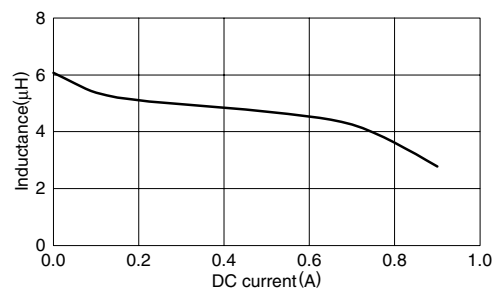
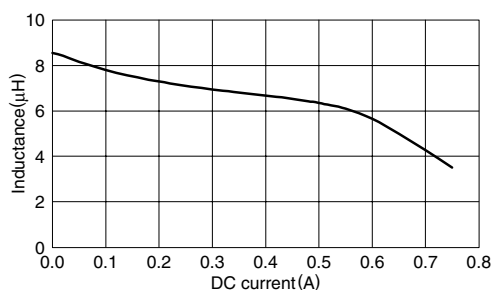
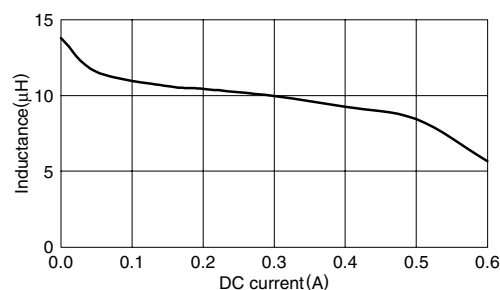
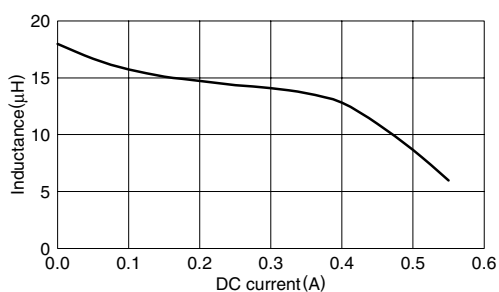
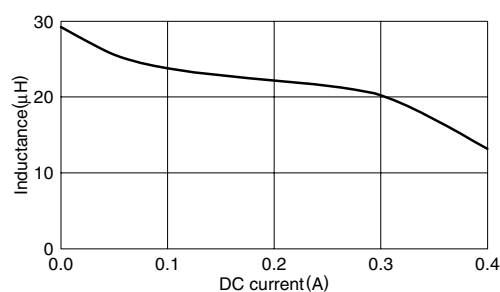
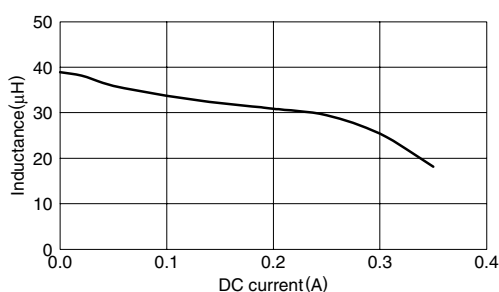
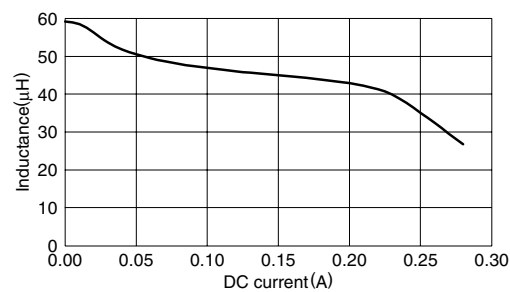


- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

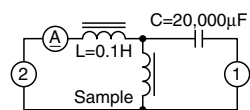
- All specifications are subject to change without notice.

## TYPICAL ELECTRICAL CHARACTERISTICS

### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

**VLF3012AT-3R3MR87**

**VLF3012AT-4R7MR74**

**VLF3012AT-6R8MR59**

**VLF3012AT-100MR49**

**VLF3012AT-150MR41**

**VLF3012AT-220MR33**

**VLF3012AT-330MR27**

**VLF3012AT-470MR22**


### TEST CIRCUIT



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