

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

Conformity to RoHS Directive

VLF Series VLF5012A

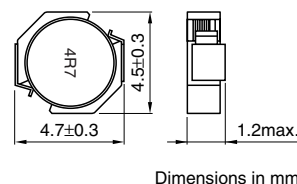
FEATURES

- Miniature size
Mount area: 4.5×4.7mm
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

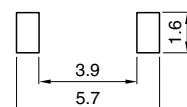
SHAPES AND DIMENSIONS



Dimensions in mm



RECOMMENDED PC BOARD PATTERN



Dimensions in mm

ELECTRICAL CHARACTERISTICS

Part No.	Inductance [at 1/2 I _{dc1}] ^{*2} (μH)	Inductance tolerance(%)	Test frequency (kHz)	DC resistance(Ω)		Rated current ^{*1} (A)	
				max.	typ.	Based on inductance change I _{dc1} max.	Based on temperature rise I _{dc2} typ.
VLF5012AT-2R2M1R5	2.2	±20	100	0.11	0.09	2.3	1.5
VLF5012AT-3R3M1R3	3.3	±20	100	0.14	0.12	1.7	1.3
VLF5012AT-4R7M1R2	4.7	±20	100	0.16	0.14	1.5	1.2
VLF5012AT-6R8M1R0	6.8	±20	100	0.2	0.17	1.2	1
VLF5012AT-100MR80	10	±20	100	0.35	0.3	1	0.8

^{*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.

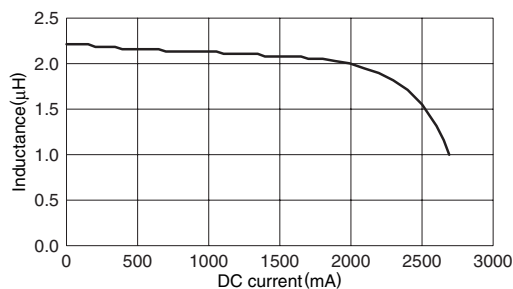
^{*2} Inductance is at 1/2 I_{dc1} power distribution. The L value at 0A is higher than the guaranteed performance.

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

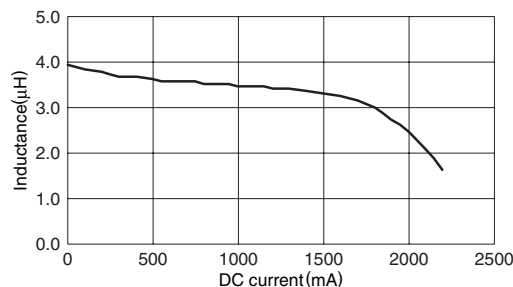
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

VLF5012AT-2R2M1R5



VLF5012AT-3R3M1R3

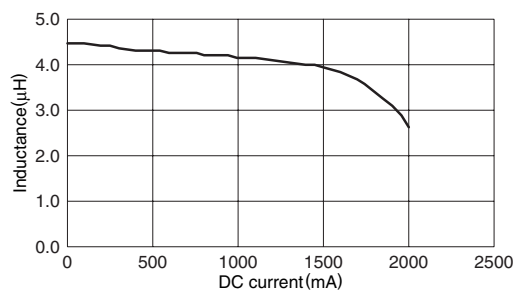
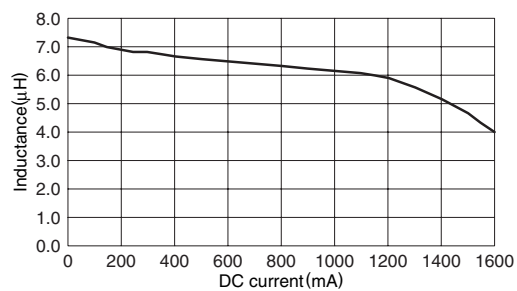
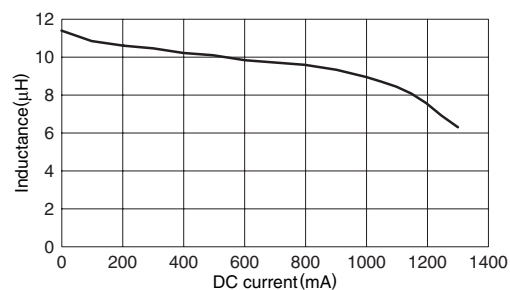


- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

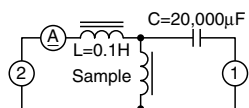
- All specifications are subject to change without notice.

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

VLF5012AT-4R7M1R2

VLF5012AT-6R8M1R0

VLF5012AT-100MR80


TEST CIRCUIT



- 1: LCR meter 4285A $f=100\text{kHz}$
 2: DC constant current