

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

Conformity to RoHS Directive

## VLF Series VLF4012S

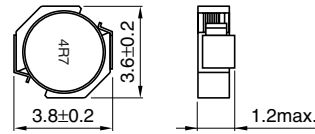
### FEATURES

- Miniature size  
Mount area: 3.6×3.8mm  
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.

### APPLICATIONS

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

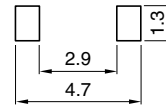
### SHAPES AND DIMENSIONS



Dimensions in mm



### RECOMMENDED PC BOARD PATTERN



Dimensions in mm

### ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Inductance tolerance(%)	Test frequency (MHz)	DC resistance(Ω)		Rated current(A)*	
				max.	typ.	Based on inductance change max.	Based on temperature rise typ.
VLF4012ST-1R0N1R9	1	±30	1	0.054	0.045	2.7	1.9
VLF4012ST-2R2M1R3	2.2	±20	1	0.12	0.097	1.7	1.3
VLF4012ST-3R3M1R1	3.3	±20	1	0.16	0.13	1.5	1.1
VLF4012ST-4R7M1R0	4.7	±20	1	0.19	0.16	1.4	1
VLF4012ST-6R8MR80	6.8	±20	1	0.32	0.27	1	0.8
VLF4012ST-100MR65	10	±20	1	0.49	0.41	0.9	0.65

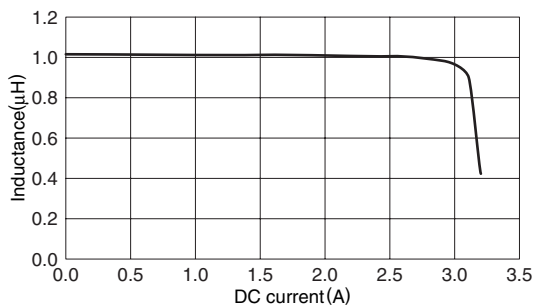
\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

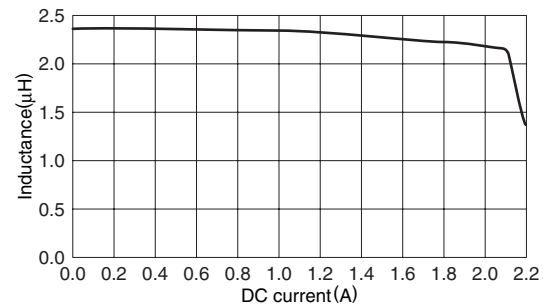
### TYPICAL ELECTRICAL CHARACTERISTICS

#### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

##### VLF4012ST-1R0N1R9



##### VLF4012ST-2R2M1R3



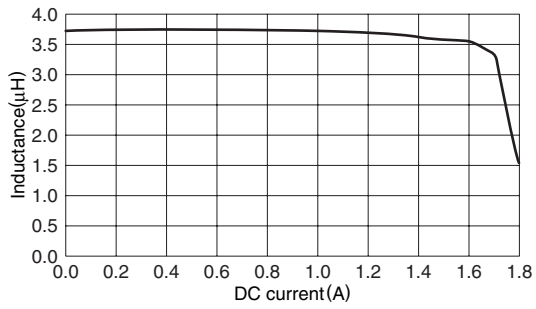
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

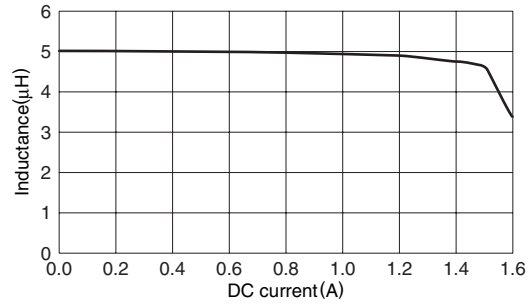
## TYPICAL ELECTRICAL CHARACTERISTICS

### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

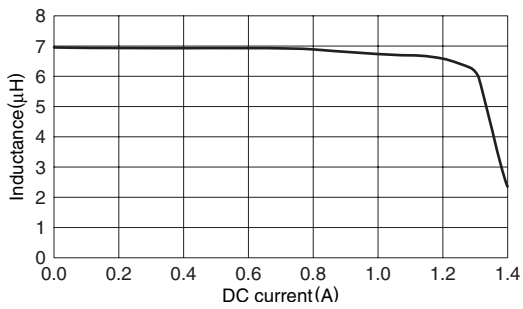
#### VLF4012ST-3R3M1R1



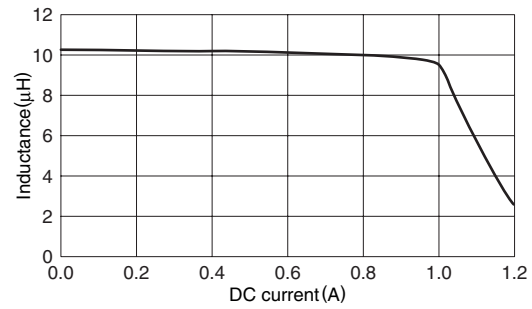
#### VLF4012ST-4R7M1R0



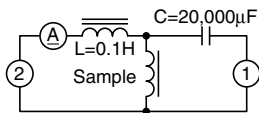
#### VLF4012ST-6R8MR80



#### VLF4012ST-100MR65



### TEST CIRCUIT



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

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