

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

Conformity to RoHS Directive

## VLF Series VLF302512MT

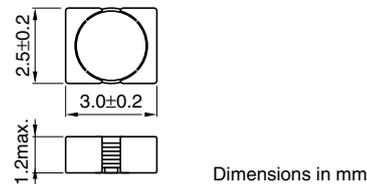
### FEATURES

- Miniature size  
Mount area: 3.0×2.5mm  
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.
- The products is halogen-free.
- It is a product conforming to RoHS directive.

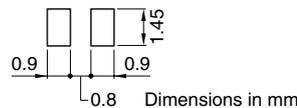
### APPLICATIONS

Smartphones, LCD displays, HDDs, Cellular phone, DVCs, DSCs, etc.

### SHAPES AND DIMENSIONS



### RECOMMENDED PC BOARD PATTERN



### ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Inductance tolerance(%)	Test frequency (MHz)	DC resistance(Ω)		Rated current*(A)		
				max.	typ.	Based on inductance change Idc1		Based on temperature rise Idc2
						max.	typ.	typ.
VLF302512MT-1R0N	1.0	±30	1.0	0.037	0.031	1.91	2.12	2.77
VLF302512MT-1R5N	1.5	±30	1.0	0.044	0.037	1.67	1.85	2.54
VLF302512MT-2R2M	2.2	±20	1.0	0.066	0.055	1.26	1.40	1.95
VLF302512MT-3R3M	3.3	±20	1.0	0.108	0.090	1.08	1.20	1.63
VLF302512MT-4R7M	4.7	±20	1.0	0.136	0.113	0.97	1.08	1.42
VLF302512MT-6R8M	6.8	±20	1.0	0.194	0.162	0.78	0.84	1.21
VLF302512MT-100M	10	±20	1.0	0.299	0.249	0.62	0.69	0.95
VLF302512MT-150M	15	±20	1.0	0.448	0.373	0.51	0.57	0.80
VLF302512MT-220M	22	±20	1.0	0.700	0.583	0.43	0.47	0.64

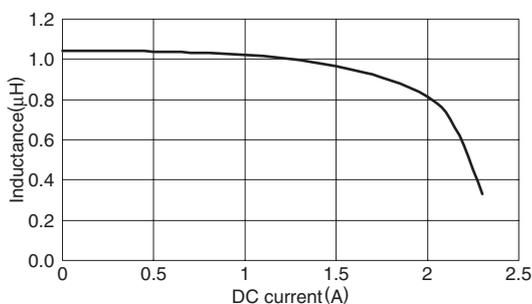
\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

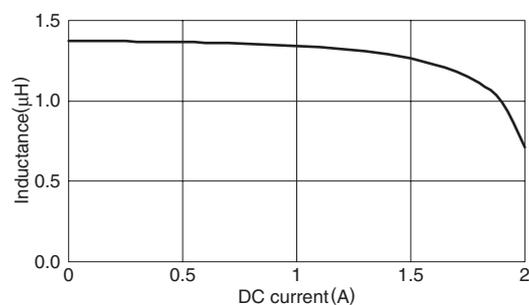
### TYPICAL ELECTRICAL CHARACTERISTICS

#### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

##### VLF302512MT-1R0N



##### VLF302512MT-1R5N

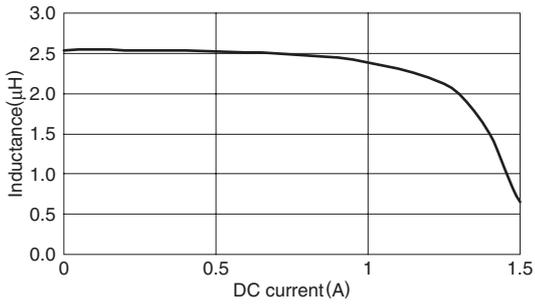


- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

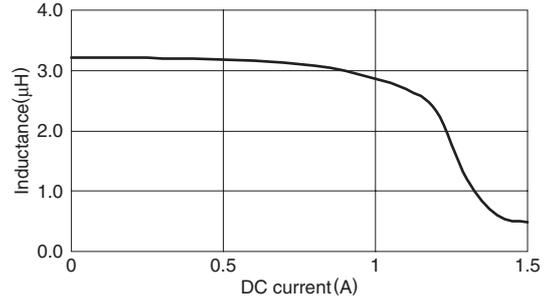
- All specifications are subject to change without notice.

### TYPICAL ELECTRICAL CHARACTERISTICS INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

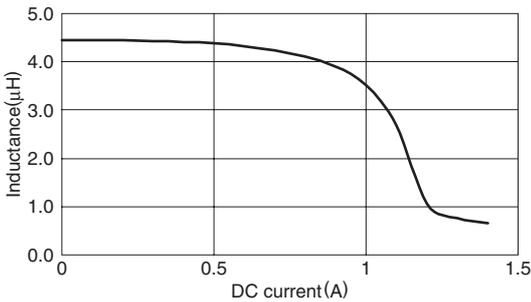
**VLF302512MT-2R2M**



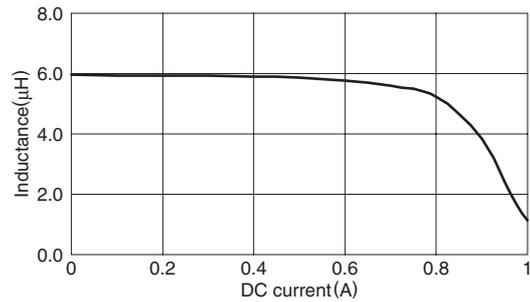
**VLF302512MT-3R3M**



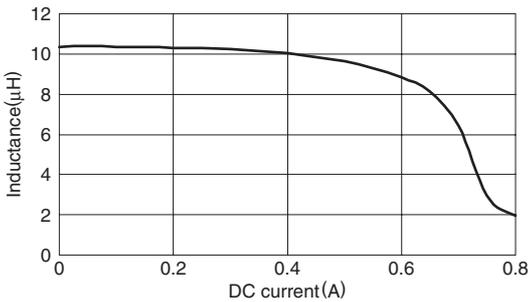
**VLF302512MT-4R7M**



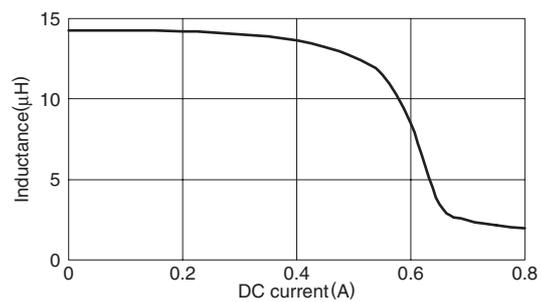
**VLF302512MT-6R8M**



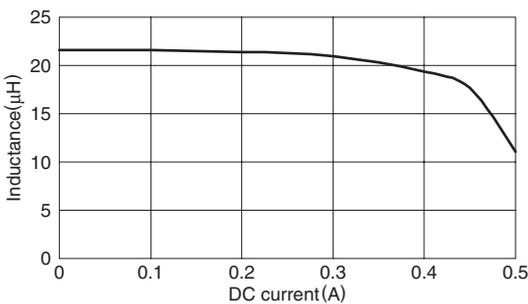
**VLF302512MT-100M**



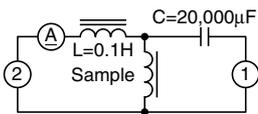
**VLF302512MT-150M**



**VLF302512MT-220M**



### TEST CIRCUIT



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