

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

Conformity to RoHS Directive

## VLF Series VLF3010A

### FEATURES

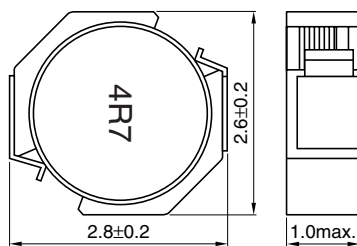
- These are compact inductors for power line measuring at L2.6×W2.8mm and 1mm in height, considerably smaller compared to inductors with comparable characteristics.
- They feature low coil resistance, making them suitable for large currents (e.g. 0.7A at 0.24Ω).
- They offer an excellent shielding effect.
- The products do not contain lead and support lead-free soldering.
- This product does not contain regulated substances that are slated to be included in RoHS.



### APPLICATIONS

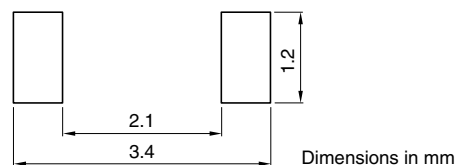
For mobile phones, hard disk drives and DSCs.

### SHAPES AND DIMENSIONS



Dimensions in mm

### RECOMMENDED PC BOARD PATTERN



Dimensions in mm

### ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Inductance tolerance	Test frequency (kHz)	DC resistance(Ω)		Rated current* (A)	
				max.	typ.	Based on inductance change max.	Based on temperature rise typ.
VLF3010AT-1R5N1R2	1.5	±30%	100	0.078	0.068	1.2	1.5
VLF3010AT-2R2M1R0	2.2	±20%	100	0.12	0.10	1.0	1.2
VLF3010AT-3R3MR87	3.3	±20%	100	0.17	0.15	0.87	1.0
VLF3010AT-4R7MR70	4.7	±20%	100	0.28	0.24	0.70	0.82
VLF3010AT-6R8MR61	6.8	±20%	100	0.39	0.34	0.61	0.68
VLF3010AT-100MR49	10.0	±20%	100	0.67	0.58	0.49	0.52
VLF3010AT-150MR40	15.0	±20%	100	0.86	0.75	0.40	0.46
VLF3010AT-220MR33	22.0	±20%	100	1.5	1.3	0.33	0.35

\* Rated current: The rated current is the smaller of the values given based on the rate of inductance change (30% decrease from the initial value) or the temperature rise (temperature rise of 40°C caused by the heat generated by the product itself).

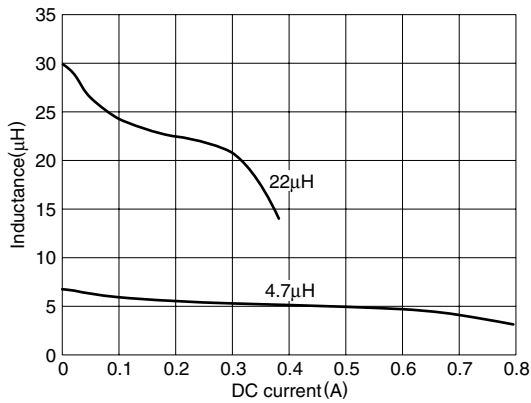
- Operating temperature range: -40 to +105°C (Including self-temperature rise)

• 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.

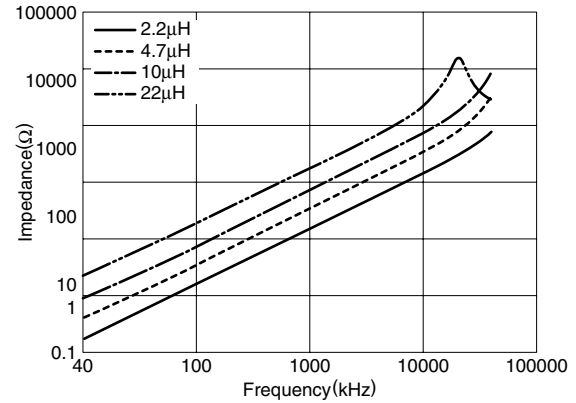
• All specifications are subject to change without notice.

## TYPICAL ELECTRICAL CHARACTERISTICS

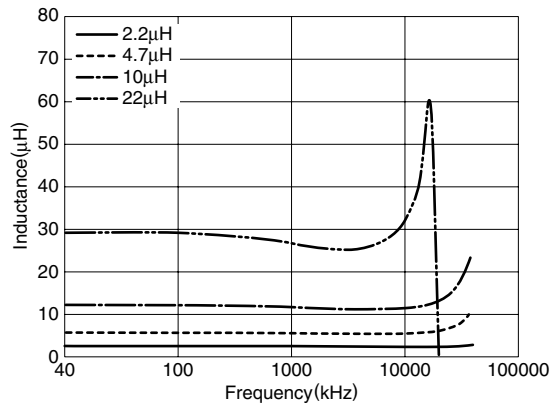
### INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



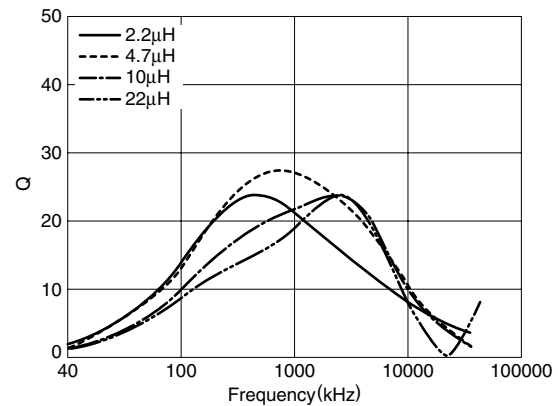
### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



### INDUCTANCE vs. FREQUENCY CHARACTERISTICS

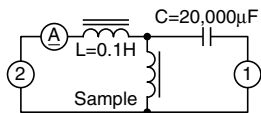


### Q vs. FREQUENCY CHARACTERISTICS



- Test equipment: YHP4194A IMPEDANCE/GAIN-PHASE ANALYZER(10kHz to 40MHz)

### TEST CIRCUIT



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