

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

Conformity to RoHS Directive

## VLS Series VLS3012

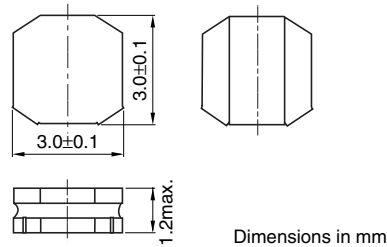
### FEATURES

- Miniature size  
Mount area: 3×3mm  
Height: 1.2mm max.
- 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 do not contain lead and support lead-free soldering.

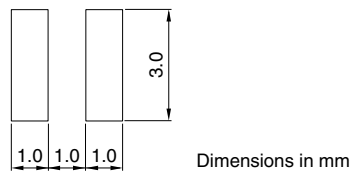
### APPLICATIONS

DVCs, DSCs, PDAs, LCD displays, cellular phones, HDDs, 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)* Based on inductance change		Based on temperature rise typ.
				max.	typ.	max.	typ.	
VLS3012T-1R0N2R2	1	±30	1	0.07	0.058	2.2	2.5	2.2
VLS3012T-1R5N1R7	1.5	±30	1	0.082	0.068	1.7	1.9	2
VLS3012T-2R2M1R5	2.2	±20	1	0.098	0.082	1.5	1.7	1.9
VLS3012T-3R3M1R3	3.3	±20	1	0.12	0.1	1.3	1.5	1.7
VLS3012T-4R7M1R0	4.7	±20	1	0.156	0.13	1	1.2	1.4
VLS3012T-6R8MR90	6.8	±20	1	0.228	0.19	0.9	1	1.2
VLS3012T-100MR72	10	±20	1	0.336	0.28	0.72	0.8	1
VLS3012T-150MR58	15	±20	1	0.528	0.44	0.58	0.65	0.81
VLS3012T-220MR49	22	±20	1	0.756	0.63	0.49	0.55	0.67
VLS3012T-330MR40	33	±20	1	1.248	1.04	0.4	0.45	0.52
VLS3012T-470MR34	47	±20	1	1.512	1.26	0.34	0.38	0.48

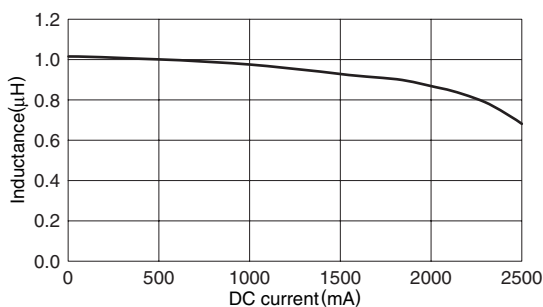
\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

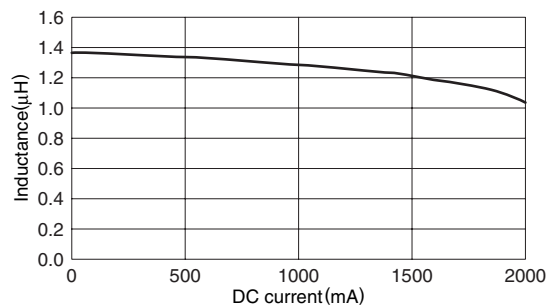
### TYPICAL ELECTRICAL CHARACTERISTICS

#### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

##### VLS3012T-1R0N2R2



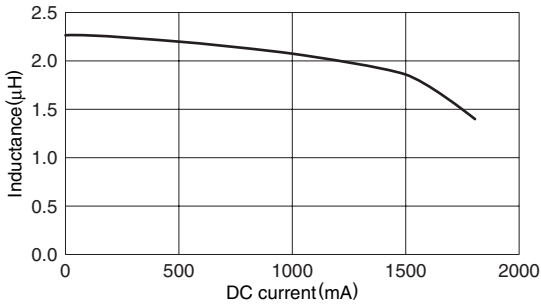
##### VLS3012T-1R5N1R7



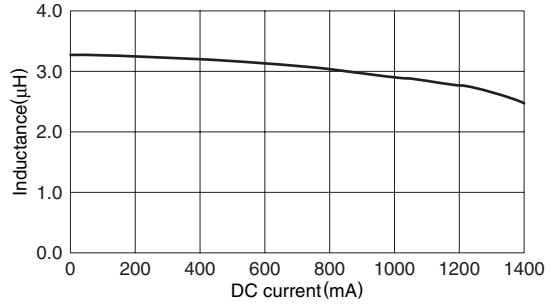
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.

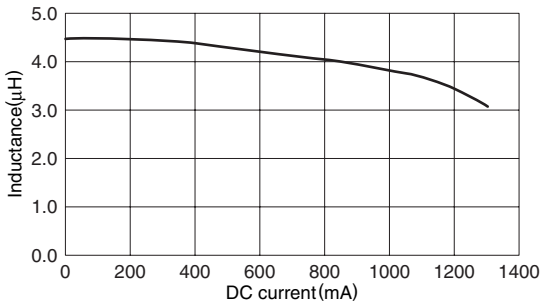
**TYPICAL ELECTRICAL CHARACTERISTICS**  
**INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS**  
**VLS3012T-2R2M1R5**



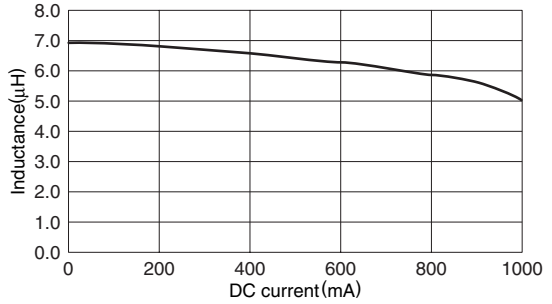
**VLS3012T-3R3M1R3**



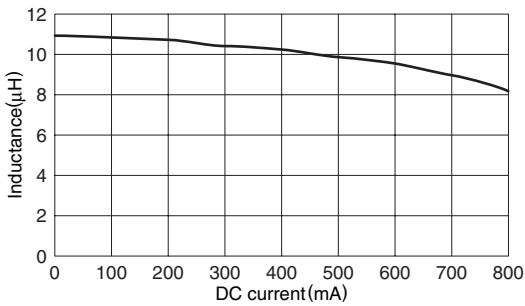
**VLS3012T-4R7M1R0**



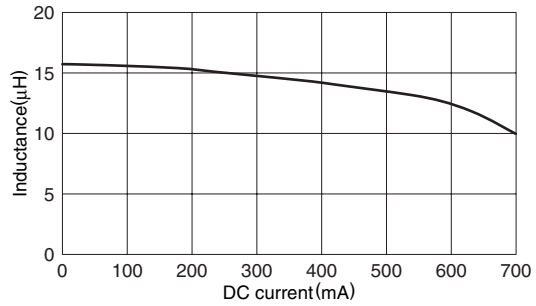
**VLS3012T-6R8MR90**



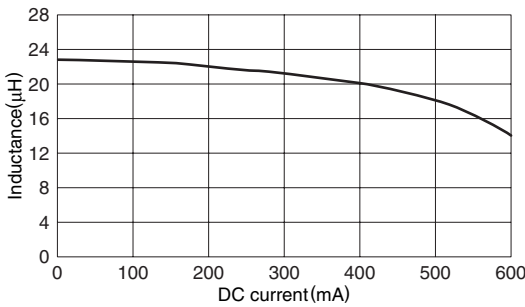
**VLS3012T-100MR72**



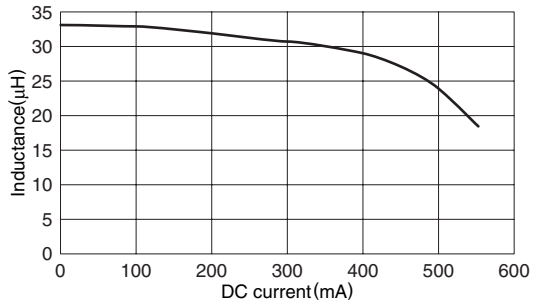
**VLS3012T-150MR58**



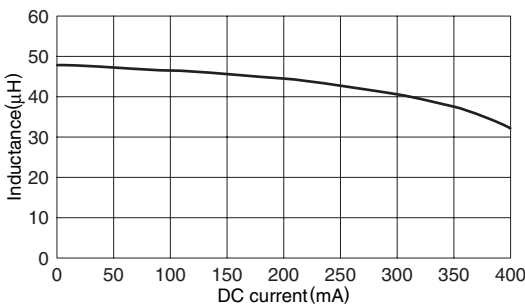
**VLS3012T-220MR49**



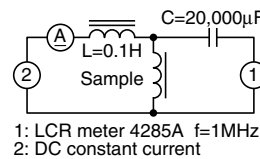
**VLS3012T-330MR40**



**VLS3012T-470MR34**



**TEST CIRCUIT**



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