

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

Conformity to RoHS Directive

## VLS Series VLS252010

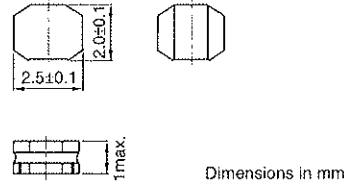
### FEATURES

- Miniature size  
Mount area: 2.5×2mm  
Height: 1.0mm 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.

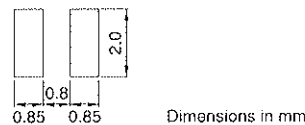
### APPLICATIONS

DVCs, DSCs, PDAs, LCD displays, cellular phones, HDDs, etc.

### SHAPES AND DIMENSIONS



### RECOMMENDED PC BOARD PATTERN



### ELECTRICAL CHARACTERISTICS

Part No.	Inductance ( $\mu\text{H}$ )	Inductance tolerance (%)	Test frequency (MHz)	DC resistance ( $\Omega$ )		Rated current(A) Based on inductance change		Based on temperature rise typ.
				max.	typ.	max.	typ.	
VLS252010T-R47N	0.47	$\pm 30$	1	0.048	0.04	2.5	2.8	2.3
VLS252010T-R68N	0.68	$\pm 30$	1	0.064	0.053	2.2	2.4	2
VLS252010T-1R0N	1	$\pm 30$	1	0.085	0.071	1.8	2	1.7
VLS252010T-1R5N	1.5	$\pm 30$	1	0.128	0.107	1.5	1.7	1.4
VLS252010T-2R2M	2.2	$\pm 20$	1	0.19	0.158	1.2	1.4	1.1
VLS252010T-3R3M	3.3	$\pm 20$	1	0.304	0.253	1	1.2	0.94
VLS252010T-4R7M	4.7	$\pm 20$	1	0.44	0.367	0.88	0.98	0.78
VLS252010T-6R8M	6.8	$\pm 20$	1	0.541	0.451	0.74	0.82	0.7
VLS252010T-100M	10	$\pm 20$	1	0.854	0.712	0.59	0.65	0.52

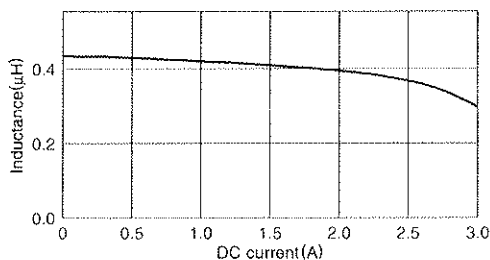
\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

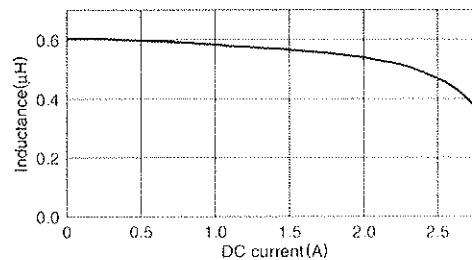
### TYPICAL ELECTRICAL CHARACTERISTICS

#### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

##### VLS252010T-R47N



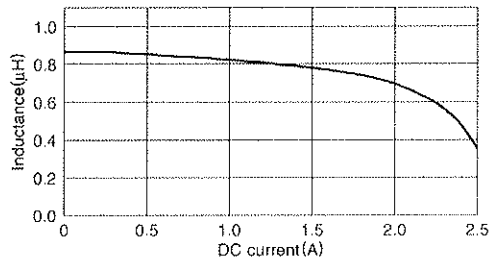
##### VLS252010T-R68N



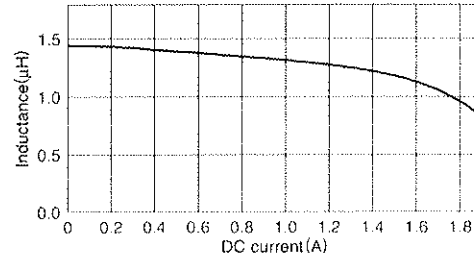
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

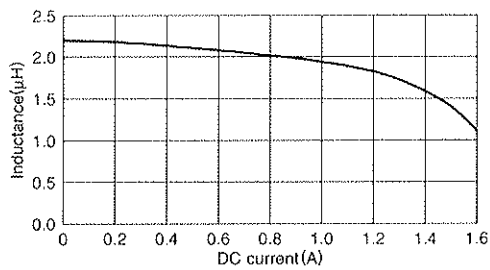
**TYPICAL ELECTRICAL CHARACTERISTICS**  
**INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS**  
**VLS252010T-1R0N**



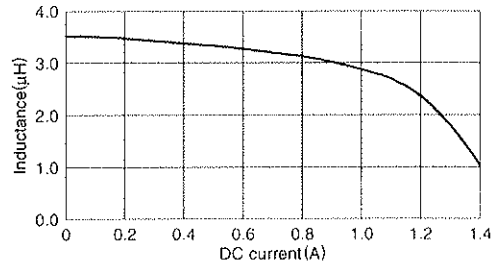
**VLS252010T-1R5N**



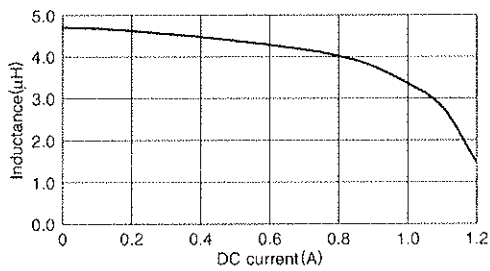
**VLS252010T-2R2M**



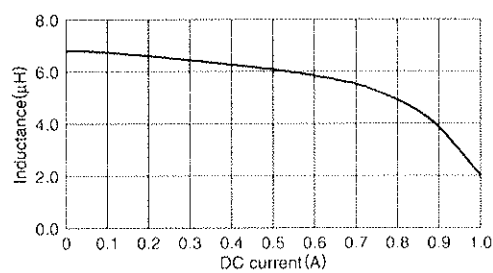
**VLS252010T-3R3M**



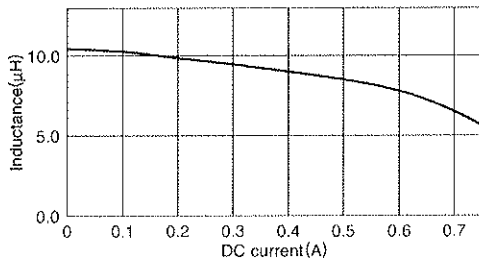
**VLS252010T-4R7M**



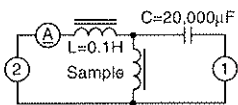
**VLS252010T-6R8M**



**VLS252010T-100M**



**TEST CIRCUIT**



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