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[VLS252012T-R47N2R1](#)

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

Conformity to RoHS Directive

## VLS Series VLS252012

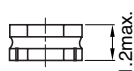
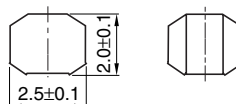
### FEATURES

- Miniature size  
 Mount area: 2.5×2mm  
 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.

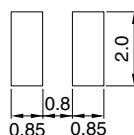
### SHAPES AND DIMENSIONS



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)* Based on inductance change		Based on temperature rise typ.
				max.	typ.	max.	typ.	
VLS252012T-R47N2R1	0.47	±30	1	0.056	0.047	3.3	3.7	2.2
VLS252012T-1R0N1R7	1	±30	1	0.088	0.073	2.4	2.7	1.8
VLS252012T-1R5N1R4	1.5	±30	1	0.126	0.105	2	2.2	1.5
VLS252012T-2R2M1R3	2.2	±20	1	0.155	0.129	1.8	2	1.3
VLS252012T-3R3MR99	3.3	±20	1	0.272	0.227	1.4	1.6	1
VLS252012T-4R7MR81	4.7	±20	1	0.406	0.338	1.2	1.3	0.8
VLS252012T-6R8MR66	6.8	±20	1	0.612	0.51	0.99	1.1	0.66
VLS252012T-100MR59	10	±20	1	0.756	0.63	0.81	0.9	0.59

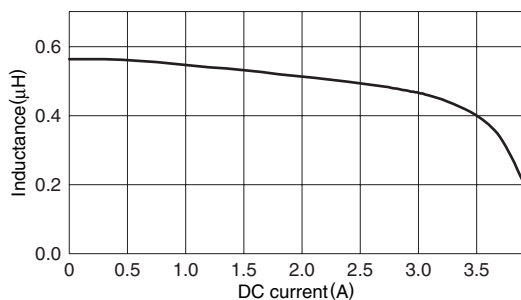
\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

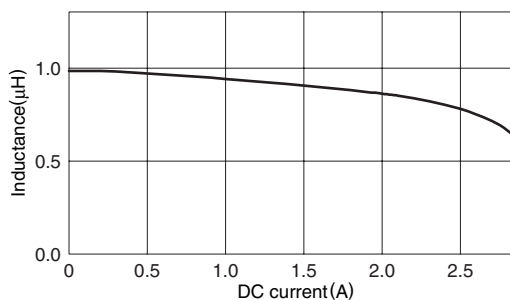
### TYPICAL ELECTRICAL CHARACTERISTICS

#### INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

VLS252012T-R47N2R1



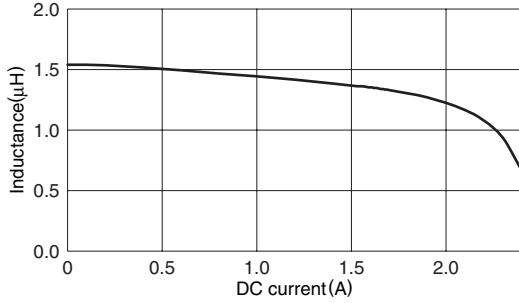
VLS252012T-1R0N1R7



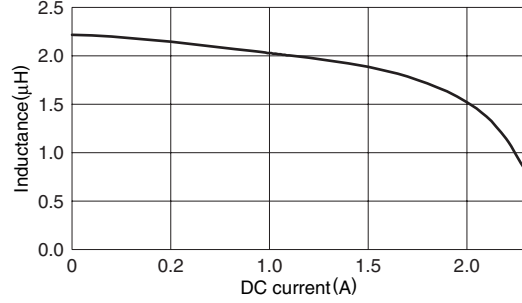
**TYPICAL ELECTRICAL CHARACTERISTICS**

**INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS**

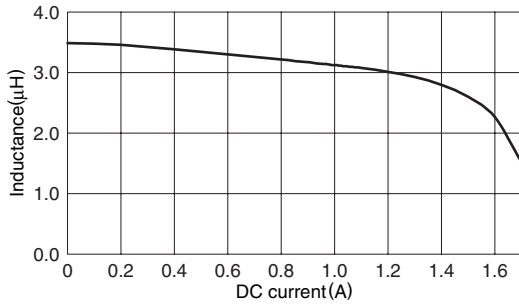
**VLS252012T-1R5N1R4**



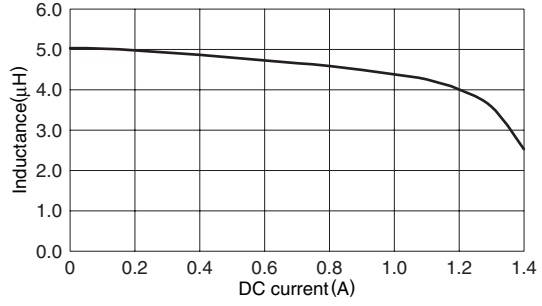
**VLS252012T-2R2M1R3**



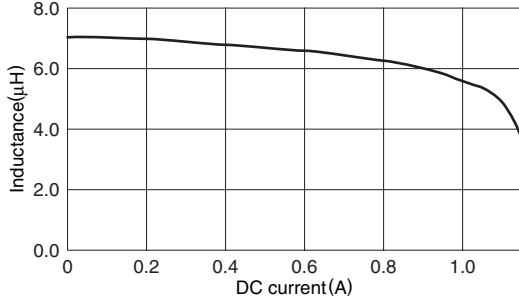
**VLS252012T-3R3MR99**



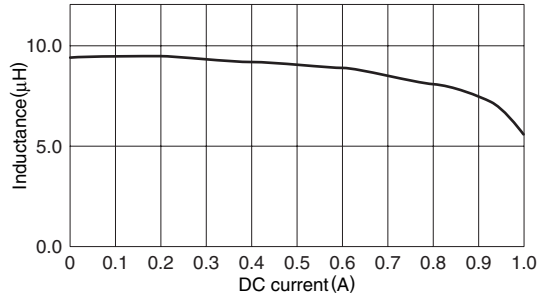
**VLS252012T-4R7MR81**



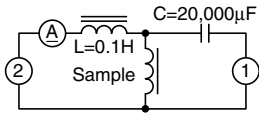
**VLS252012T-6R8MR66**



**VLS252012T-100MR59**



**TEST CIRCUIT**



1: LCR meter 4285A f=1MHz  
 2: DC constant current