

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

Conformity to RoHS Directive

## VLC Series VLC5020

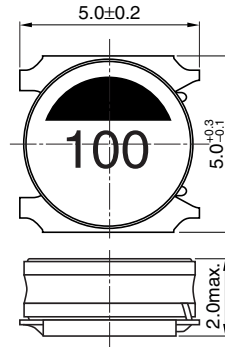
### FEATURES

- Miniature size  
Mount area: 5×5mm  
Height: 2.0mm max.
- Generic use for portable DC to DC converter line.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.
- It is a product conforming to halogen-free.

### APPLICATIONS

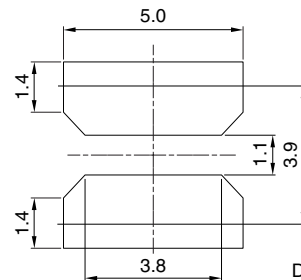
DC to DC converters for LCD TVs, printers, note PCs, etc.

### SHAPES AND DIMENSIONS

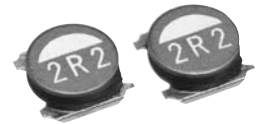


Dimensions in mm

### RECOMMENDED PC BOARD PATTERN



Dimensions in mm



### ELECTRICAL CHARACTERISTICS

Part No.	Inductance ( $\mu$ H)	Inductance tolerance (%)	Test frequency (kHz)	DC resistance ( $\Omega$ )		Rated current(A)*	
				max.	typ.	Based on inductance change max.	Based on temperature rise typ.
VLC5020T-R47N	0.47	$\pm$ 30	100	0.018	0.015	5.6	5.4
VLC5020T-1R2N	1.2	$\pm$ 30	100	0.030	0.026	3.8	4.0
VLC5020T-1R5N	1.5	$\pm$ 30	100	0.038	0.032	3.3	3.9
VLC5020T-2R2N	2.2	$\pm$ 30	100	0.045	0.038	3.0	3.7
VLC5020T-3R3N	3.3	$\pm$ 30	100	0.071	0.060	2.4	2.9
VLC5020T-4R7N	4.7	$\pm$ 30	100	0.097	0.081	2.0	2.4
VLC5020T-100M	10	$\pm$ 20	100	0.186	0.156	1.3	1.8

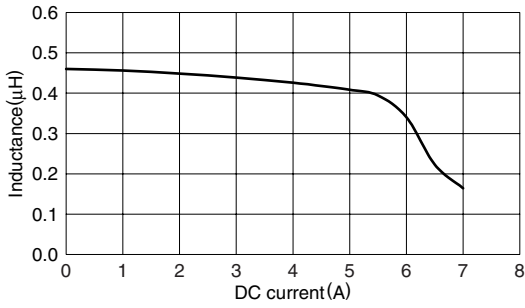
\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

- Operating temperature range: -40 to +105°C (Including self-temperature rise)
- Test equipment Inductance: 4285A PRECISION LCR METER, HP or equivalent  
Rdc: MILLIOHM METER VP-2941A, MATSUSHITA or equivalent  
L(ldc1): 4285A PRECISION LCR METER, HP with 42841A BIAS CURRENT SOURCE, HP/42842C TEST FIXTURE, HP or equivalent

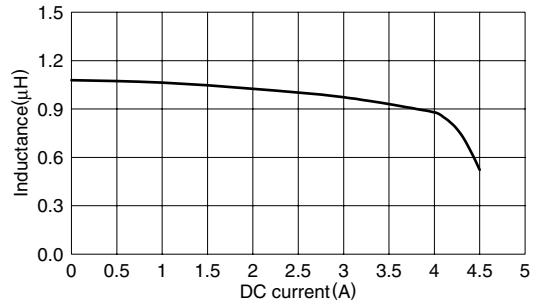
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.

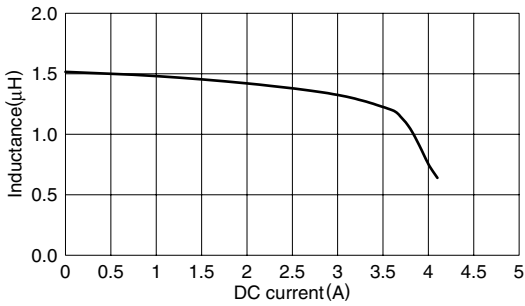
**TYPICAL ELECTRICAL CHARACTERISTICS**  
**INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS**  
**VLC5020T-R47N**



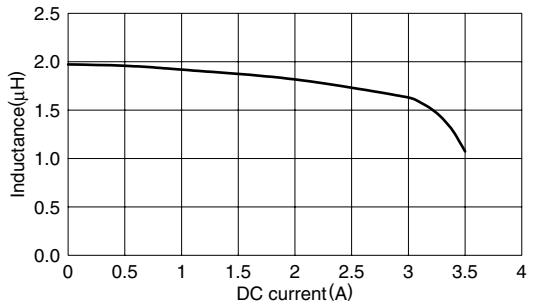
**VLC5020T-1R2N**



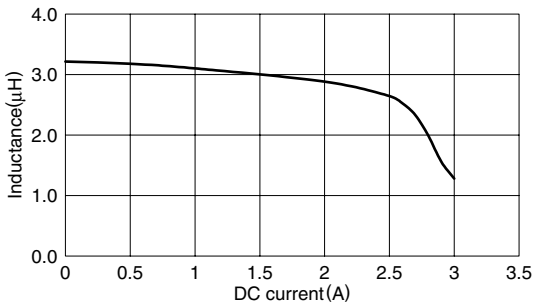
**VLC5020T-1R5N**



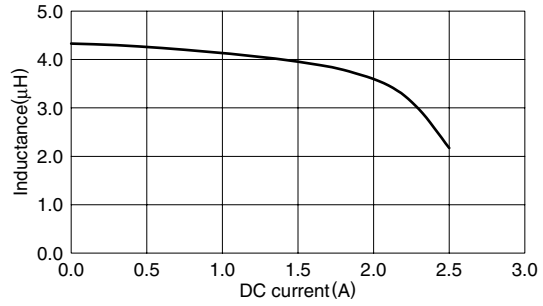
**VLC5020T-2R2N**



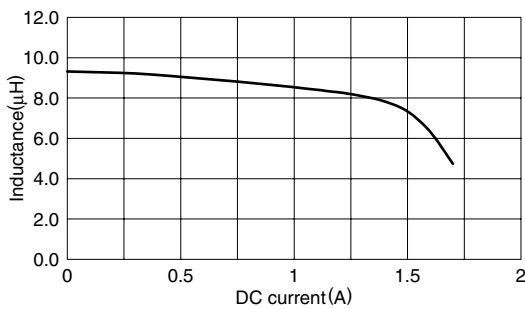
**VLC5020T-3R3N**



**VLC5020T-4R7N**



**VLC5020T-100M**



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