

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

Conformity to RoHS Directive

VLS Series VLS252010

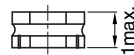
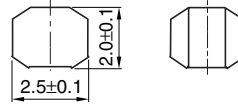
FEATURES

- 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

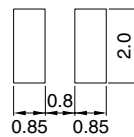
DVCs, DSCs, PDAs, LCD displays, cellular phones, HDDs, etc.

SHAPES AND DIMENSIONS



Dimensions in mm

RECOMMENDED PC BOARD PATTERN



Dimensions in mm

ELECTRICAL CHARACTERISTICS

| Part No. | Inductance (μ H) | Inductance tolerance (%) | Test frequency (MHz) | DC resistance (Ω) | | Rated current(A)* | | |
|-----------------|--------------------------|--------------------------------|-------------------------|-------------------------------|-------|----------------------------|------|--------------------------------------|
| | | | | max. | typ. | Based on inductance change | | Based on temperature rise 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 |

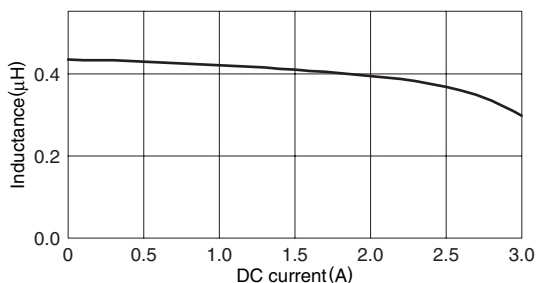
* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

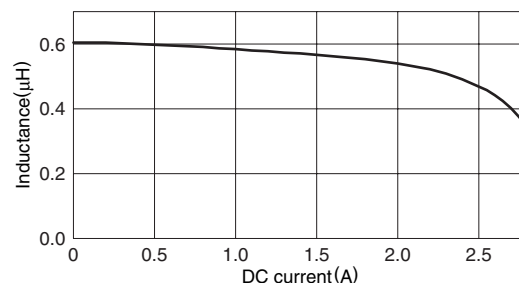
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

VLS252010T-R47N



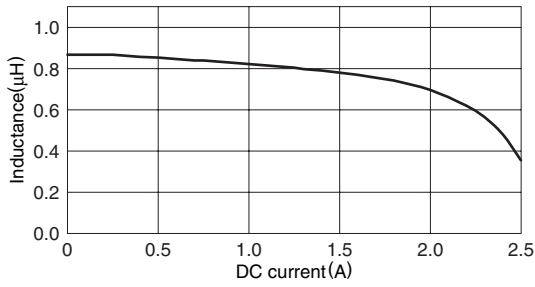
VLS252010T-R68N



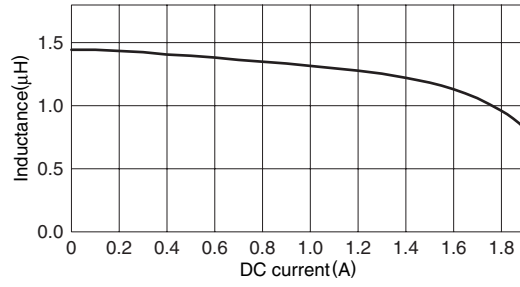
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.

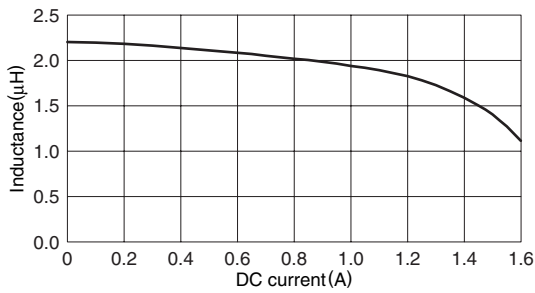
TYPICAL ELECTRICAL CHARACTERISTICS
INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS
VLS252010T-1R0N



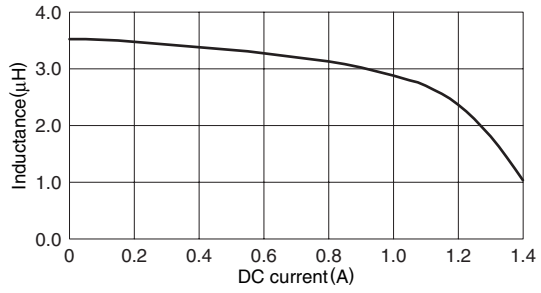
VLS252010T-1R5N



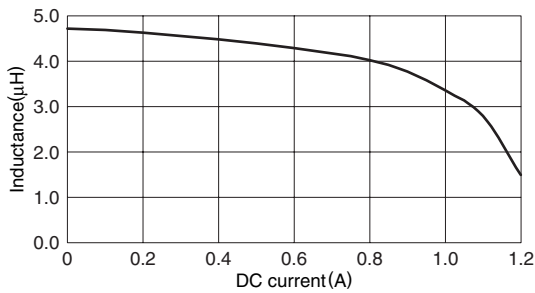
VLS252010T-2R2M



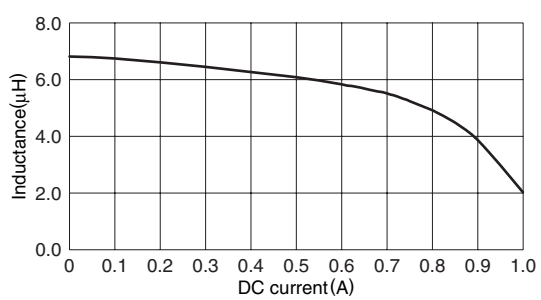
VLS252010T-3R3M



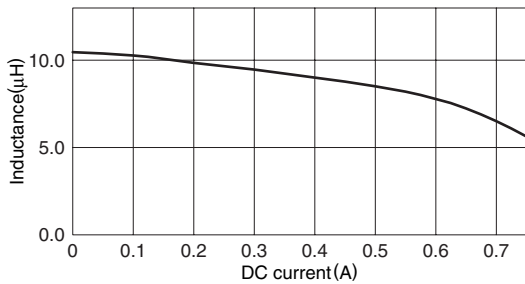
VLS252010T-4R7M



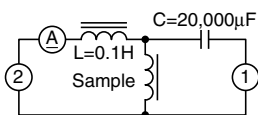
VLS252010T-6R8M



VLS252010T-100M



TEST CIRCUIT



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

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