TDK

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

Conformity to RoHS Directive

VLS Series VLS252010

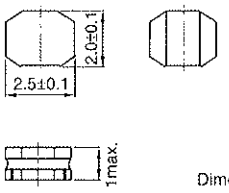
FEATURES

- 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 real package.
- The products do not contain lead and support lead-free soldering.

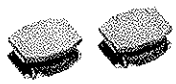
APPLICATIONS

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

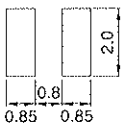
SHAPES AND DIMENSIONS



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
				max.	typ.	max.	typ.	typ.
VLS252010T-R47N	0.47	±30	1	0.048	0.04	2.5	2.8	2.3
VLS252010T-R68N	0.68	±30	1	0.064	0.053	2.2	2.4	2
VLS252010T-1R0N	1	±30	1	0.085	0.071	1.8	2	1.7
VLS252010T-1R5N	1.5	±30	1	0.128	0.107	1.5	1.7	1.4
VLS252010T-2R2M	2.2	±20	1	0.19	0.158	1.2	1.4	1.1
VLS252010T-3R3M	3.3	±20	1	0.304	0.253	1	1.2	0.94
VLS252010T-4R7M	4.7	±20	1	0.44	0.367	0.88	0.98	0.78
VLS252010T-6R8M	6.8	±20	1	0.541	0.451	0.74	0.82	0.7
VLS252010T-100M	10	±20	1	0.854	0.712	0.59	0.65	0.52

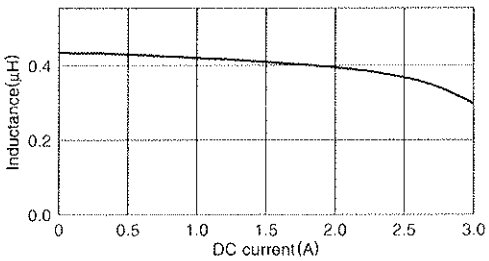
* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

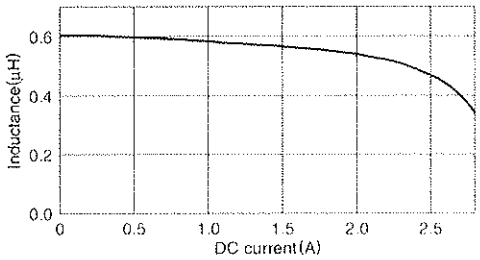
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

VLS252010T-R47N



VLS252010T-R68N

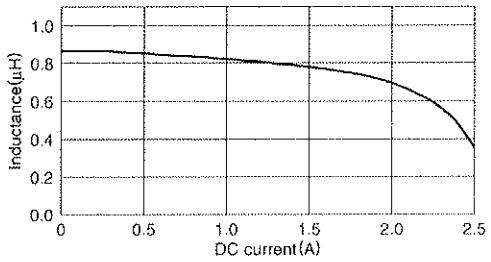


- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

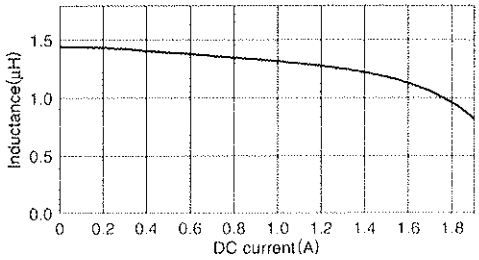
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

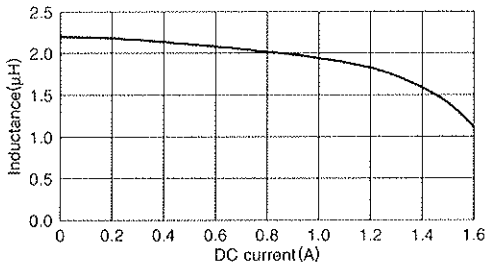
VLS252010T-1R0N



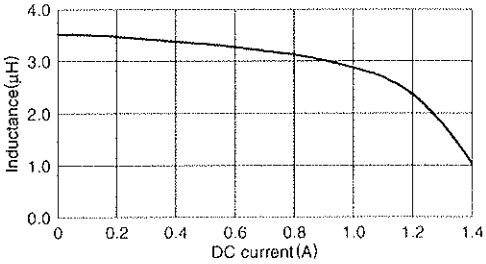
VLS252010T-1R5N



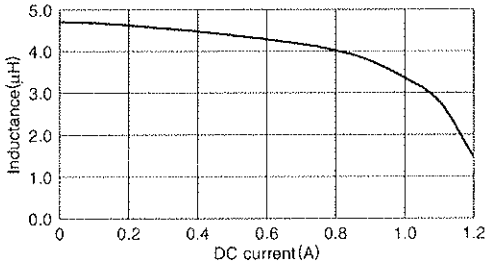
VLS252010T-2R2M



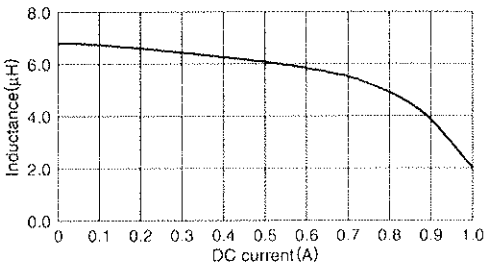
VLS252010T-3R3M



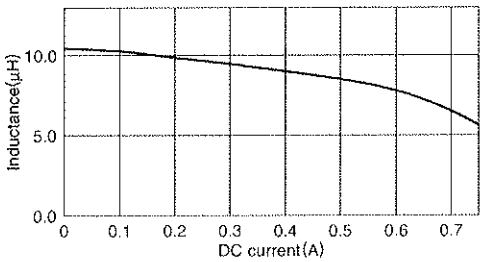
VLS252010T-4R7M



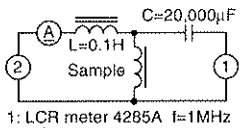
VLS252010T-6R8M



VLS252010T-100M



TEST CIRCUIT



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