TDK

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

Conformity to RoHS Directive

VLF Series VLF5010S

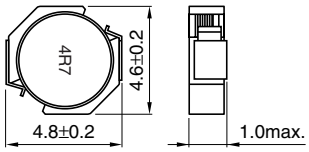
FEATURES

- Miniature size
  Mount area: 4.6×4.8mm
  Low profile: 1.0mm max. height
- 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 contain no lead and also support lead-free soldering.
- It is a product conforming to RoHS directive.

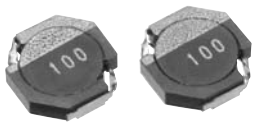
APPLICATIONS

Power souce inductor for mobile devices such as mobile phones, HDDs, and DSCs

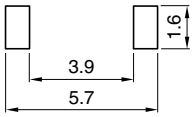
SHAPES AND DIMENSIONS



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)*	
				max.	typ.	Based on inductance change max.	Based on temperature rise typ.
VLF5010ST-1R0N2R5	1	±30	1	0.054	0.045	2.7	2.5
VLF5010ST-2R2M2R0	2.2	±20	1	0.077	0.064	2	2
VLF5010ST-3R3M1R4	3.3	±20	1	0.16	0.13	1.6	1.4
VLF5010ST-4R7M1R3	4.7	±20	1	0.18	0.15	1.4	1.3
VLF5010ST-6R8M1R1	6.8	±20	1	0.24	0.2	1.1	1.2
VLF5010ST-100MR94	10	±20	1	0.37	0.31	1	0.94

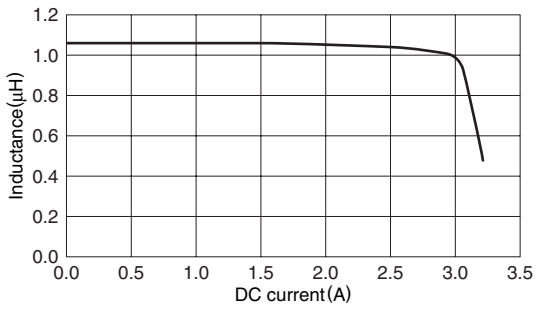
* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

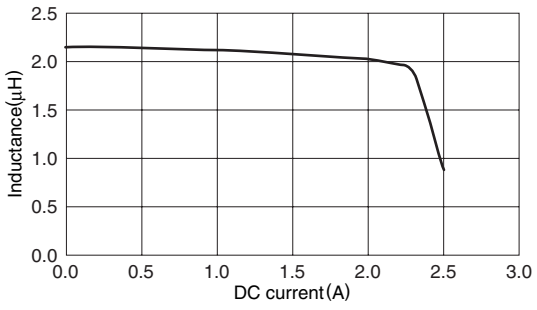
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

VLF5010ST-1R0N2R5



VLF5010ST-2R2M2R0

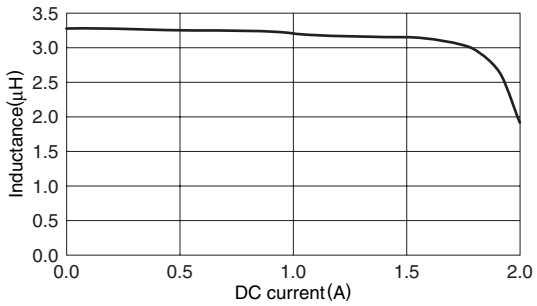


- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

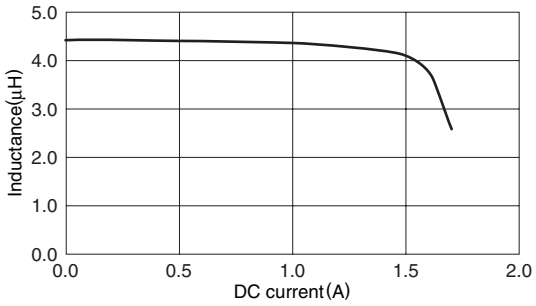
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

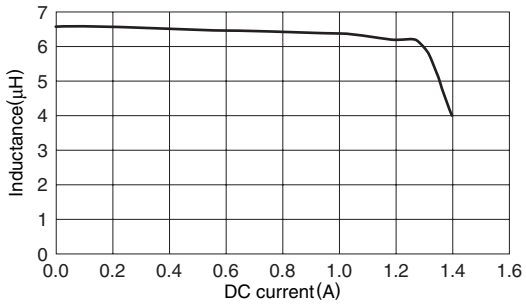
VLF5010ST-3R3M1R4



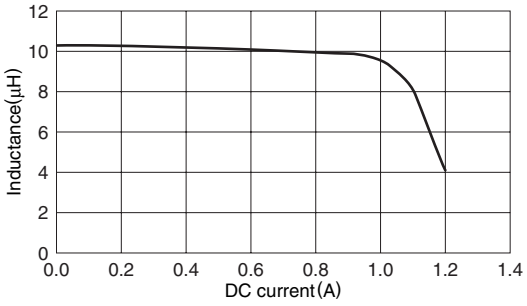
VLF5010ST-4R7M1R3



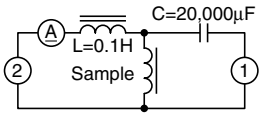
VLF5010ST-6R8M1R1



VLF5010ST-100MR94



TEST CIRCUIT



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

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