

# SMD Inductors(Coils)

## For Power Line(Wound, Magnetic Shielded)

Conformity to RoHS Directive

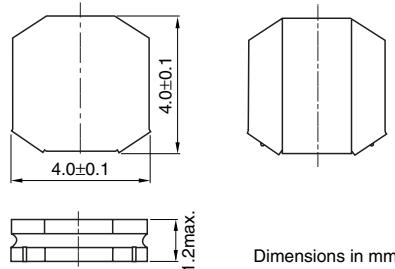
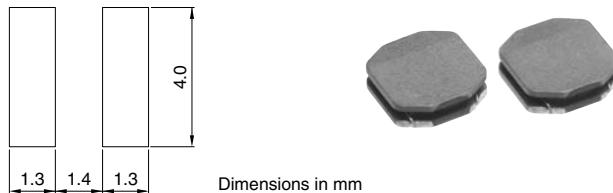
VLS Series VLS4012E

**FEATURES**

- Miniature size  
Mount area: 4×4mm  
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**

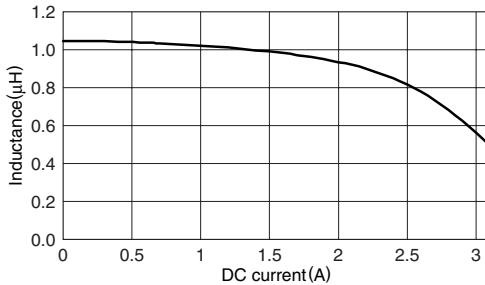
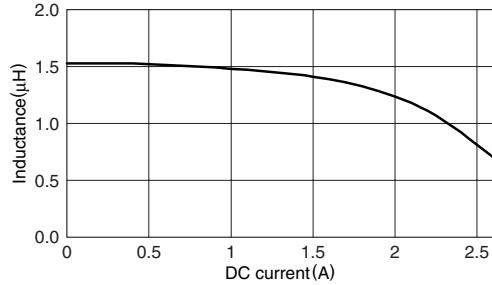
Cellular phones, DVCs, DSCs, PDAs, LCD displays, HDDs, etc.

**SHAPES AND DIMENSIONS****RECOMMENDED PC BOARD PATTERN****ELECTRICAL CHARACTERISTICS**

Part No.	Inductance ( $\mu$ H)	Inductance tolerance (%)	Test frequency (MHz)	DC resistance ( $\Omega$ )		Rated current(A)*		Based on temperature rise typ.
				max.	typ.	max.	typ.	
VLS4012ET-1R0N	1.0	±30	1.0	0.060	0.050	2.50	2.80	2.65
VLS4012ET-1R5N	1.5	±30	1.0	0.072	0.060	2.10	2.30	2.45
VLS4012ET-2R2M	2.2	±20	1.0	0.081	0.067	1.70	1.90	2.20
VLS4012ET-3R3M	3.3	±20	1.0	0.102	0.085	1.40	1.60	2.00
VLS4012ET-4R7M	4.7	±20	1.0	0.118	0.098	1.20	1.40	1.90
VLS4012ET-6R8M	6.8	±20	1.0	0.156	0.130	1.00	1.20	1.60
VLS4012ET-100M	10	±20	1.0	0.228	0.190	0.89	0.99	1.33
VLS4012ET-150M	15	±20	1.0	0.372	0.310	0.70	0.78	1.05
VLS4012ET-220M	22	±20	1.0	0.468	0.390	0.63	0.70	0.95
VLS4012ET-330M	33	±20	1.0	0.804	0.670	0.47	0.53	0.70
VLS4012ET-470M	47	±20	1.0	1.020	0.850	0.41	0.46	0.61

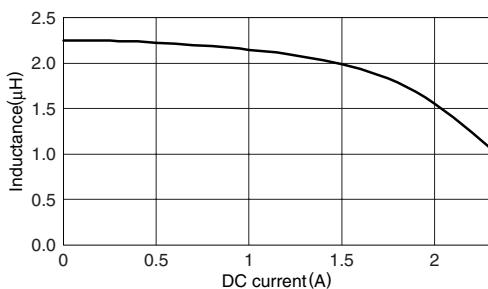
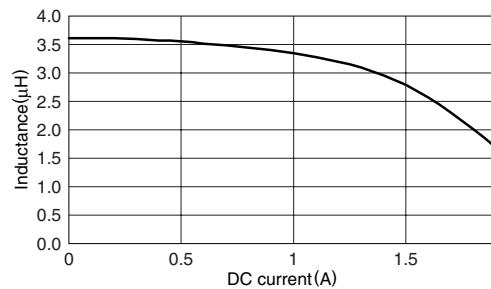
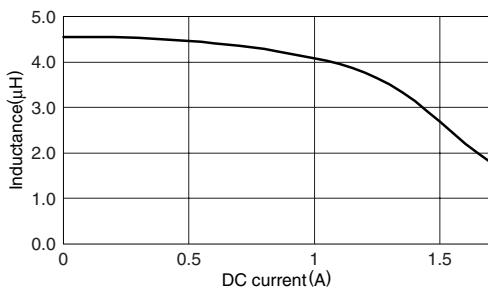
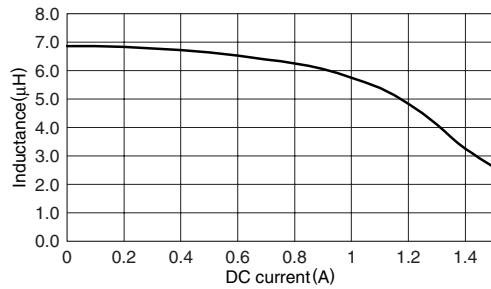
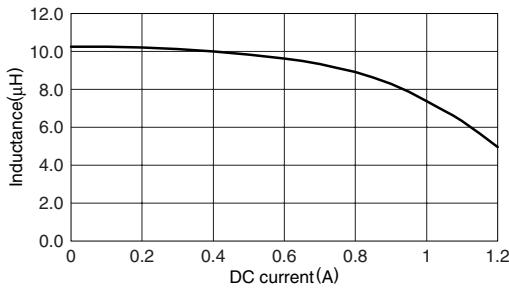
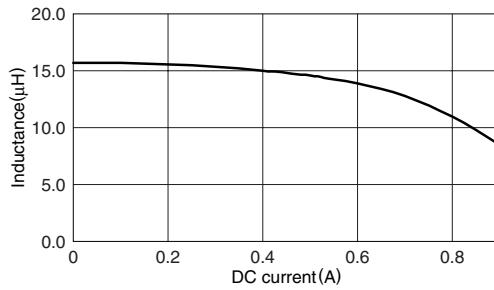
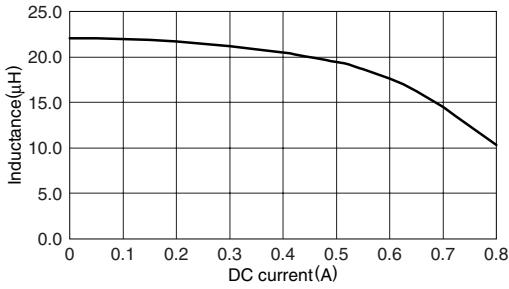
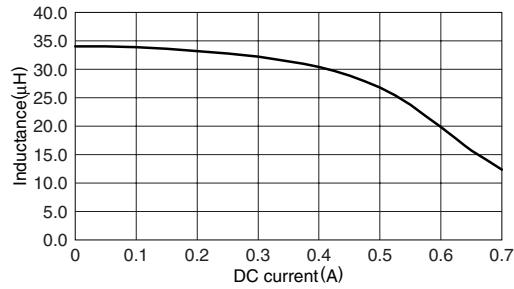
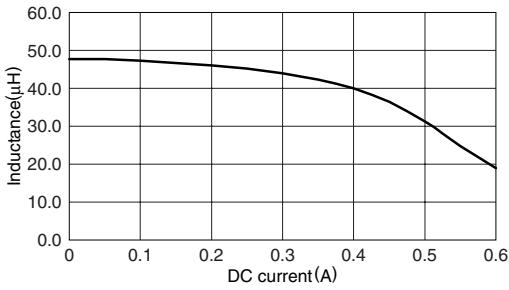
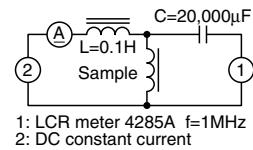
\* Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the nominal value of inductance has fallen by 30%, whichever is smaller.

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

**TYPICAL ELECTRICAL CHARACTERISTICS****INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS****VLS4012ET-1R0N****VLS4012ET-1R5N**

• 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**
**VLS4012ET-2R2M**

**VLS4012ET-3R3M**

**VLS4012ET-4R7M**

**VLS4012ET-6R8M**

**VLS4012ET-100M**

**VLS4012ET-150M**

**VLS4012ET-220M**

**VLS4012ET-330M**

**VLS4012ET-470M**

**TEST CIRCUIT**


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