Inductors for Power Supply Circuit

Wound/STD • magnetic shielded

VLM series

Type: **VLM10555-2**
VLM10555-3
VLM13580-D1

Issue date: September 2011

- All specifications are subject to change without notice.
- 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.

TDK

Inductors for Power Supply Circuit Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

VLM Series VLM10555-2

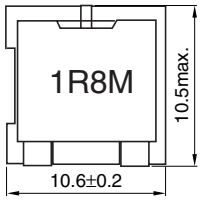
FEATURES

- Low loss and large current capability design.
- High magnetic shield construction should actualize high resolution for EMC protection.
- Magnetic coupling type core with low magnetic flux leakage and a three-terminal structure.
- Available for automatic mounting in tape and real package.

APPLICATIONS

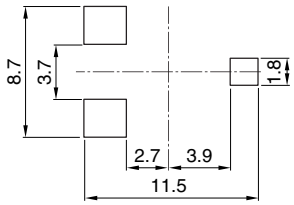
Note book type and mobile computers, amusement equipment, DVD players, VRMs, plasma displays, etc.

SHAPES AND DIMENSIONS



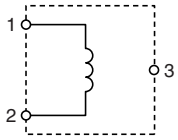
Dimensions in mm

RECOMMENDED PC BOARD PATTERN



Dimensions in mm

CIRCUIT DIAGRAM



ELECTRICAL CHARACTERISTICS

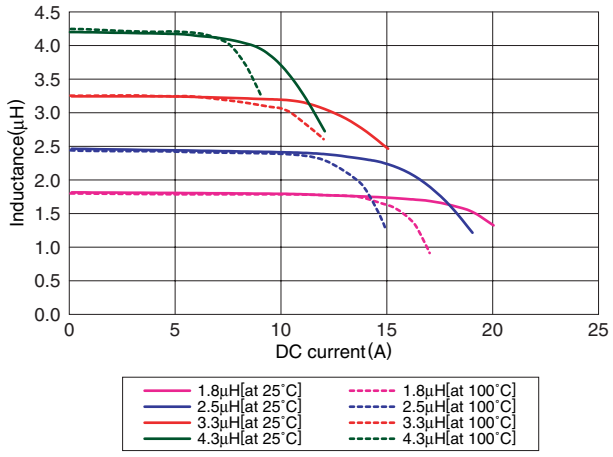
Part No.	Inductance (µH)	Inductance tolerance (%)	Test frequency (kHz)	DC resistance (mΩ)		Rated current(A)*		
						Based on inductance change max.(typ.)		Based on temperature rise
				[±15%]	typ.	[at 25°C]	[at 100°C]	typ.
VLM10555T-1R8M8R8-2	1.8	±20	100	5.6	5.6	18(20)	14(16)	8.8
VLM10555T-2R5M8R0-2	2.5	±20	100	6.7	6.7	15(17)	12(14)	8
VLM10555T-3R3M7R2-2	3.3	±20	100	8.3	8.3	12(14)	10(12)	7.2
VLM10555T-4R3M7R2-2	4.3	±20	100	8.3	8.3	9(11)	7(9)	7.2

* 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.

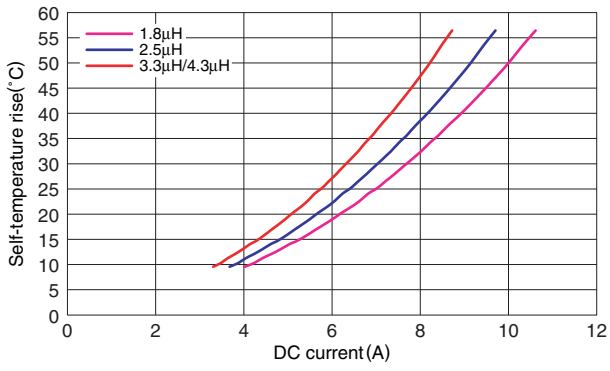
- Operating temperature range: –40 to +125°C (Including self-temperature rise)
- Test equipment WK 3260B PRECISION MAGNETICS ANALYZER, WK 3265B 25A DC BIAS UNIT, or equivalent

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



TEMPERATURE RISE CHARACTERISTICS



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Inductors for Power Supply Circuit
Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

VLM Series VLM10555-3

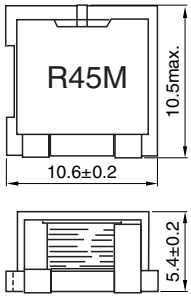
FEATURES

- Low loss and large current capability design.
- High magnetic shield construction should actualize high resolution for EMC protection.
- Magnetic coupling type core with low magnetic flux leakage and a three-terminal structure.
- Available for automatic mounting in tape and real package.

APPLICATIONS

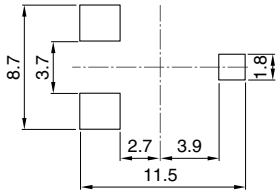
Note book type and mobile computers, amusement equipment, DVD players, VRMs, plasma displays, etc.

SHAPES AND DIMENSIONS



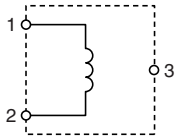
Dimensions in mm

RECOMMENDED PC BOARD PATTERN



Dimensions in mm

CIRCUIT DIAGRAM



ELECTRICAL CHARACTERISTICS

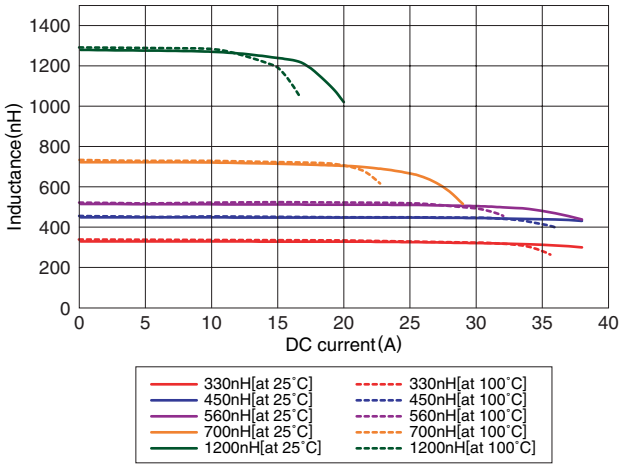
Part No.	Inductance (nH)	Inductance tolerance (%)	Test frequency (kHz)	DC resistance (mΩ)		Rated current(A)*		
						Based on inductance change max.		Based on temperature rise
				max.	typ.	[at 25°C]	[at 100°C]	typ.
VLM10555T-R33M180-3	330	±20	100	1.2	0.95	34	30	18
VLM10555T-R45M110-3	450	±20	100	2.6	2.2	40	34	11
VLM10555T-R56M120-3	560	±20	100	2.5	2.1	34	26	12
VLM10555T-R70M120-3	700	±20	100	2.5	2.1	26	21	12
VLM10555T-1R2M100-3	1200	±20	100	3.2	2.7	18	15	10

* 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.

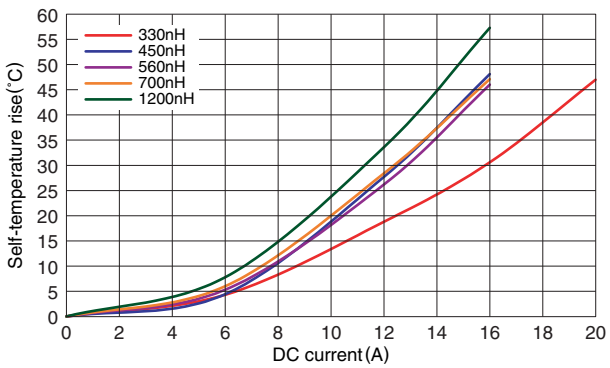
- Operating temperature range: –40 to +125°C (Including self-temperature rise)
- Test equipment WK 3260B PRECISION MAGNETICS ANALYZER, WK 3265B 25A DC BIAS UNIT, or equivalent

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



TEMPERATURE RISE CHARACTERISTICS



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Inductors for Power Supply Circuit
Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

VLM Series VLM13580-D1

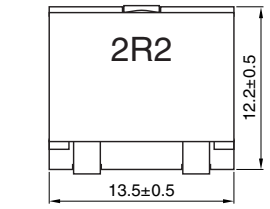
FEATURES

- Low loss and large current capability design.
- High magnetic shield construction should actualize high resolution for EMC protection.
- Magnetic coupling type core with low magnetic flux leakage and a three-terminal structure.
- Available for automatic mounting in tape and real package.

APPLICATIONS

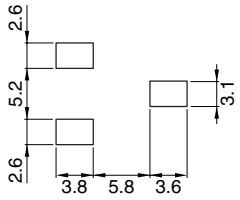
Mobile computers etc.

SHAPES AND DIMENSIONS



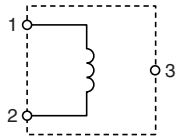
Dimensions in mm

RECOMMENDED PC BOARD PATTERN



Dimensions in mm

CIRCUIT DIAGRAM



ELECTRICAL CHARACTERISTICS

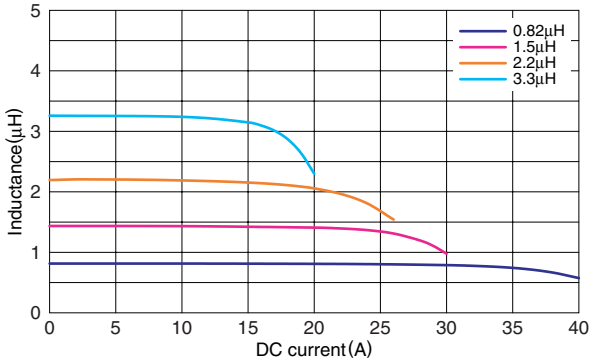
Part No.	Inductance (µH)	Inductance tolerance (%)	Test frequency (kHz)	DC resistance (mΩ)		Rated current(A)*		
				[±15%] max.	typ.	Based on inductance change max.	Based on temperature rise typ. Self-temperature rise 20°C	Based on temperature rise typ. Self-temperature rise 40°C
VLM13580T-R82M-D1	0.82	±20	100	2	1.7	36	12.6	18.5
VLM13580T-1R5M-D1	1.5	±20	100	2.5	2.1	26	11.7	17.2
VLM13580T-2R2M-D1	2.2	±20	100	3.9	3.3	20	10.5	14.8
VLM13580T-3R3M-D1	3.3	±20	100	4.5	3.8	18	8.4	11.7

* Rated current: Value obtained when current flows and the temperature has risen to 20°C or 40°C or when DC current flows and the initial value of inductance has fallen by 30%, whichever is smaller.

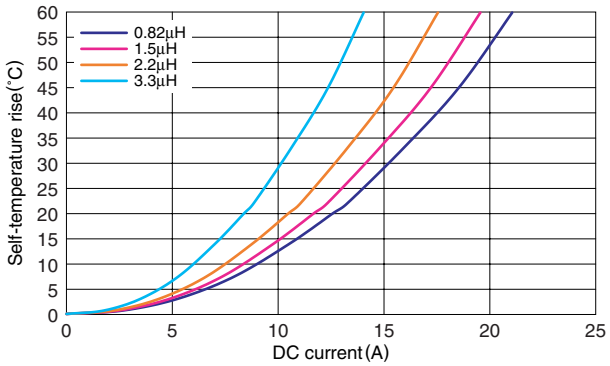
- Operating temperature range: –40 to +150°C (Including self-temperature rise)
- Test equipment WK 3260B PRECISION MAGNETICS ANALYZER, WK 3265B 25A DC BIAS UNIT, or equivalent

TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



TEMPERATURE RISE CHARACTERISTICS



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Mouser Electronics

Authorized Distributor

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TDK:

VLM10555T-3R3M7R2-2H VLM10555T-R56M120-3H VLM10555T-R70M120-3H VLM10555T-R70M120-3 VLM13580T-2R2M-D1 VLM10555T-2R5M8R0-2 VLM10555T-1R8M8R8-2H VLM10555T-2R5M8R0-2H VLM10555T-R56M120-3 VLM10555T-3R3M7R2-2 VLM10555T-4R3M7R2-2 VLM10555T-R33M180-3H VLM10555T-1R8M8R8-2 VLM10555T-4R3M7R2-2H VLM13580T-R82M-D1 VLM10555T-R33M180-3 VLM10555T-1R2M100-3 VLM10555T-R45M110-3