

Inductors for Power Circuits

Wound/STD • magnetic shielded

CLF-D series

Type: CLF7045-D (6.9x7.2 mm)

Issue date: May 2012

- 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.
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Wound/STD • Magnetic Shielded

Conformity to RoHS Directive

CLF-D Series CLF7045-D

This automotive product offers 150°C heat resistance with magnetic shielding.

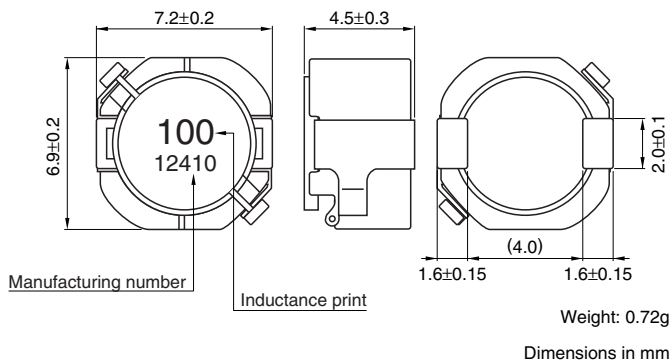
FEATURES

- It is miniature size of the magnetic shield type.
Mount area: 6.9×7.2mm
Height: 4.5±0.3mm
- Capable of operating under a wide range of temperatures.
–40 to +150°C (Including self-temperature rise)
- Compliant with AEC-Q200.
- Available for automatic mounting in tape and reel package.
- The products do not contain lead and support lead-free soldering.

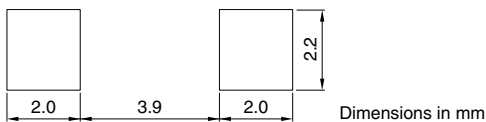
APPLICATIONS

For on-board equipment(ECM, SRS Air Bag, HID, EPS, Transmission control, Brake control, etc.)

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERN



CIRCUIT DIAGRAM



PRODUCT IDENTIFICATION

CLF 7045 T ○○○ □ - D
(1) (2) (3) (4) (5) (6)

(1) Series name

(2) Dimensions □ ×H mm

(3) Packaging style

T	Taping (Embossed carrier tape)
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(4) Inductance value

1R0	1.0μH
100	10μH
101	100μH

(5) Inductance tolerance

M	±20%
N	±30%

(6) TDK-EPC internal code

PACKAGING STYLE AND QUANTITIES

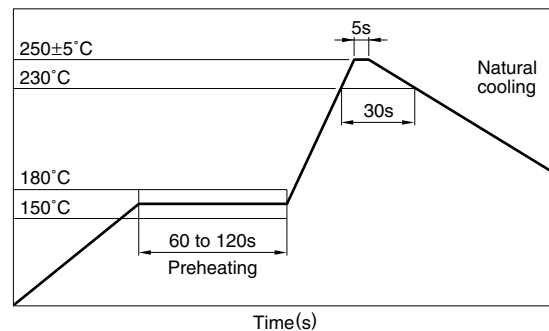
Packaging style	Quantity
Taping	1000 pieces/reel

HANDLING AND PRECAUTIONS

- Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed 150°C.
- When hand soldering, apply the soldering iron to the printed circuit board only. Temperature of the iron tip should not exceed 400±5°C. Soldering time should not exceed 3 seconds.

RECOMMENDED SOLDERING CONDITION

REFLOW SOLDERING



• 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.

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ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Inductance tolerance(%)	Test frequency (kHz)	DC resistance (Ω)	Rated current(A)*	
					Based on inductance change	Based on temperature rise
CLF7045T-1R0N-D	1	± 30	100	9.6m $\pm 30\%$	8.9	5.2
CLF7045T-1R5N-D	1.5	± 30	100	11.0m $\pm 30\%$	7.3	4.9
CLF7045T-2R2N-D	2.2	± 30	100	14.6m $\pm 30\%$	5.5	4.3
CLF7045T-3R3N-D	3.3	± 30	100	16.4m $\pm 30\%$	5.0	4.1
CLF7045T-4R7N-D	4.7	± 30	100	20m $\pm 30\%$	4.1	3.6
CLF7045T-6R8N-D	6.8	± 30	100	27m $\pm 30\%$	3.3	3.0
CLF7045T-100M-D	10	± 20	100	38m $\pm 20\%$	2.7	2.5
CLF7045T-150M-D	15	± 20	100	51m $\pm 20\%$	2.3	2.1
CLF7045T-220M-D	22	± 20	100	69m $\pm 20\%$	1.9	1.8
CLF7045T-330M-D	33	± 20	100	0.11 $\pm 20\%$	1.55	1.40
CLF7045T-470M-D	47	± 20	100	0.15 $\pm 20\%$	1.30	1.20
CLF7045T-680M-D	68	± 20	100	0.21 $\pm 20\%$	1.10	0.95
CLF7045T-101M-D	100	± 20	100	0.33 $\pm 20\%$	0.90	0.75
CLF7045T-151M-D	150	± 20	100	0.48 $\pm 20\%$	0.67	0.61
CLF7045T-221M-D	220	± 20	100	0.66 $\pm 20\%$	0.62	0.52
CLF7045T-331M-D	330	± 20	100	1.03 $\pm 20\%$	0.49	0.42
CLF7045T-471M-D	470	± 20	100	1.42 $\pm 20\%$	0.43	0.37

* Rated current: Value obtained when current flows and the temperature has risen to 30°C or when DC current flows and the nominal value of inductance has fallen by 10%, whichever is smaller.

• Operating temperature range: -40 to +150°C (Including self-temperature rise)

• Test equipment

Inductance: 4285A PRECISION LCR METER, HP or equivalent

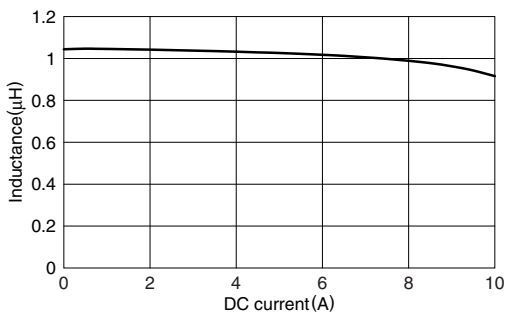
Rdc: MILLIOHM METER VP-2941A, MATSUSHITA or equivalent

Rated current: 4285A PRECISION LCR METER, HP with 42841A BIAS CURRENT SOURCE, HP/42842C TEST FIXTURE, HP or equivalent

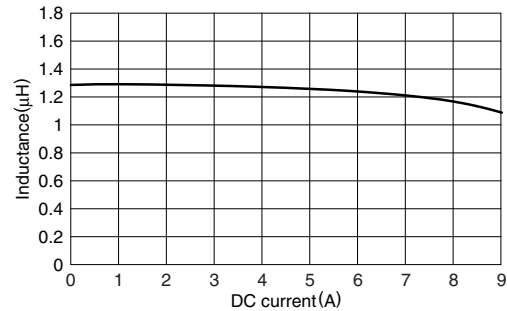
TYPICAL ELECTRICAL CHARACTERISTICS

INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS

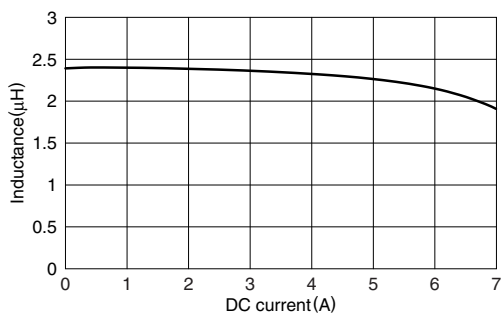
CLF7045T-1R0N-D



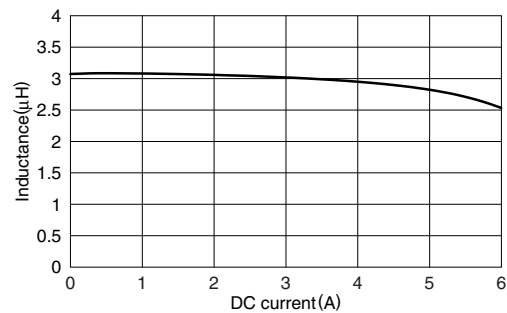
CLF7045T-1R5N-D



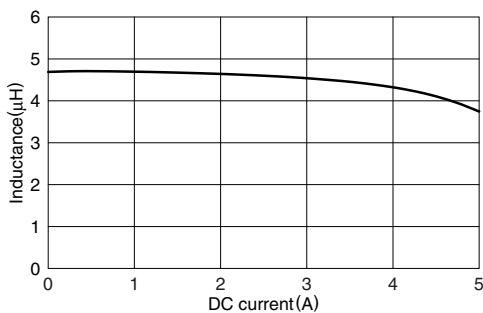
CLF7045T-2R2N-D



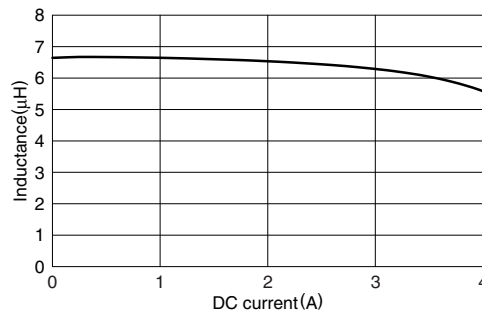
CLF7045T-3R3N-D



CLF7045T-4R7N-D

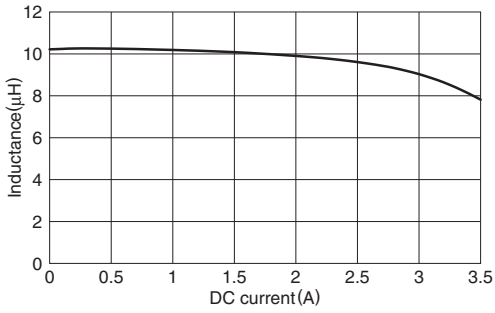


CLF7045T-6R8N-D

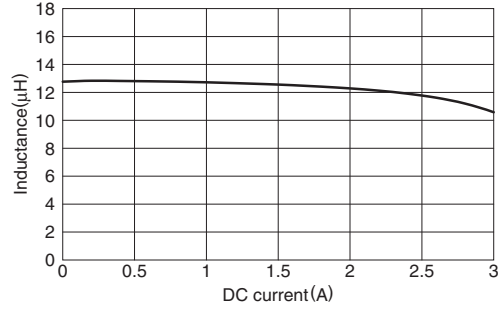


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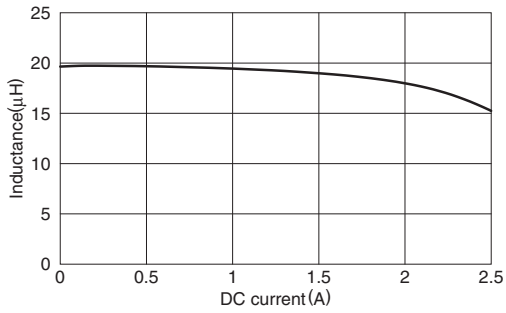
TYPICAL ELECTRICAL CHARACTERISTICS
INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS
CLF7045T-100M-D



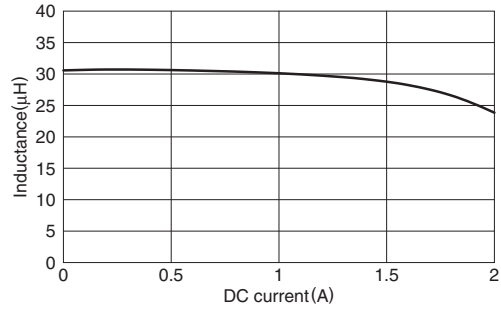
CLF7045T-150M-D



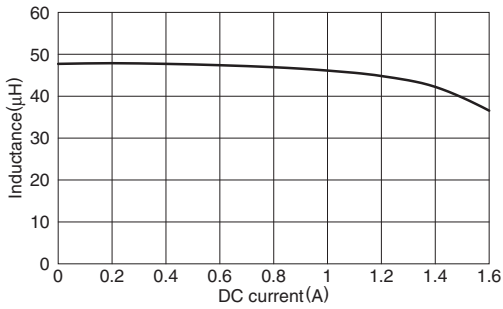
CLF7045T-220M-D



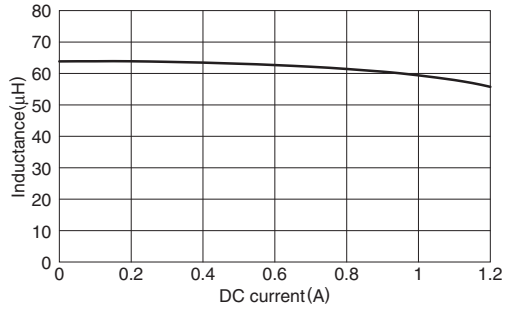
CLF7045T-330M-D



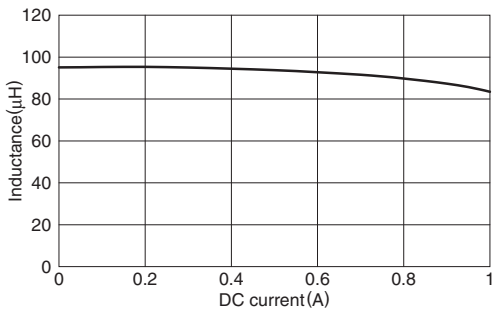
CLF7045T-470M-D



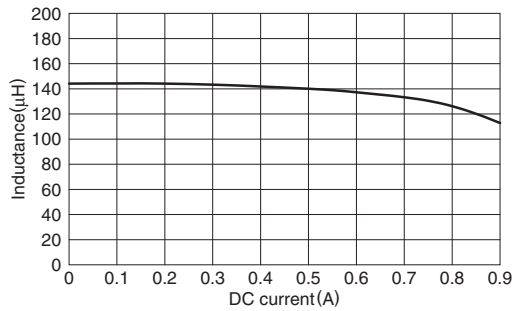
CLF7045T-680M-D



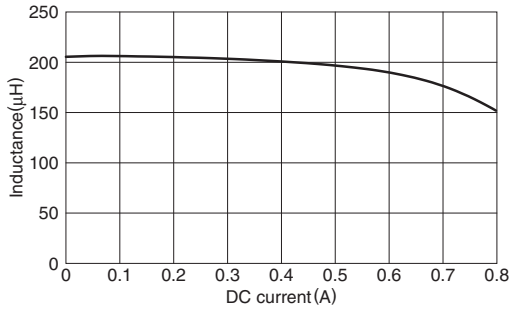
CLF7045T-101M-D



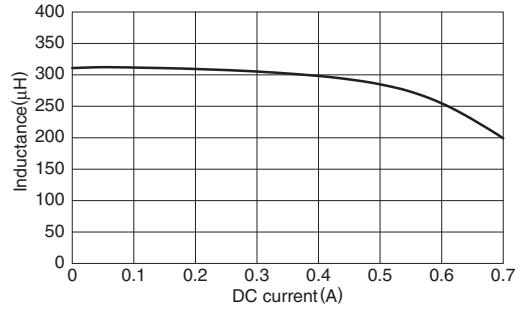
CLF7045T-151M-D



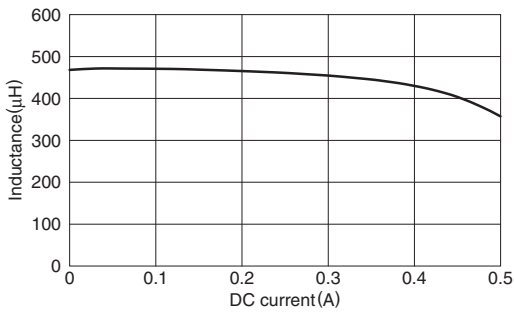
TYPICAL ELECTRICAL CHARACTERISTICS
INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS
CLF7045T-221M-D



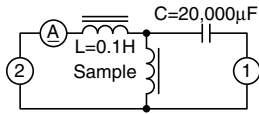
CLF7045T-331M-D



CLF7045T-471M-D

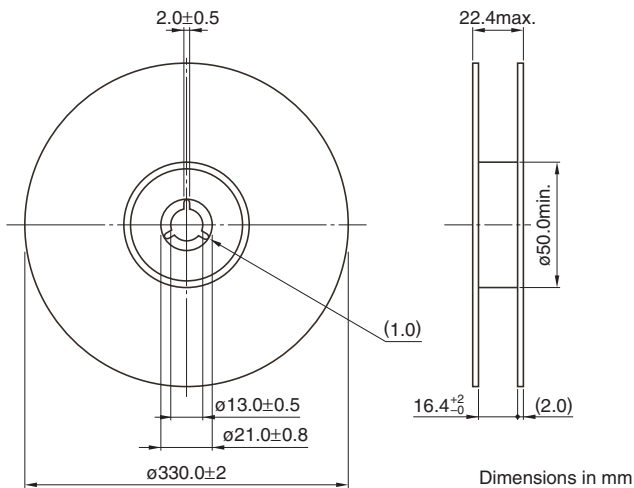


TEST CIRCUIT



- 1: LCR meter 4285A f=100kHz
- 2: DC constant current source

PACKAGING STYLES
REEL DIMENSIONS



TAPE DIMENSIONS

