



◆ **Features**

- 1、Magnetic-resin shielded construction reduces buzz noise to ultra-low levels;
- 2、Metallization on ferrite core results in excellent shock resistance and damage-free durability;
- 3、Closed magnetic circuit design reduces leakage flux and Electro Magnetic Interference (EMI);
- 4、30% higher current rating than conventional inductors of equal size;
- 5、Take up less PCB real estate and save more power.



◆ **Applications**

- 1、LED Lighting;
- 2、Mobile devices with multifunction such as adding color TV and camera;
- 3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
- 4、Notebooks, desktop computers, servers, graphic cards;
- 5、Portable gaming devices, personal navigation systems, personal multimedia devices;
- 6、Automotive systems
- 7、Telecomm base stations

◆ **Lead Free Part Numbering**

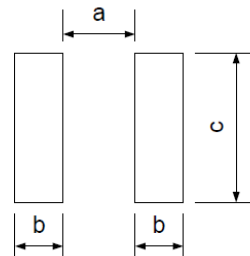
CMLW 6045 S 100 M S T
(1) (2) (3) (4) (5) (6) (7)

- (1) Series Type
- (2) Dimension: L X H
- (3) Material Code
- (4) Inductance: 2R2=2.2 μ H ;
100=10 μ H; 101=100 μ H
- (5) Inductance Tolerance: M= \pm 20%, N= \pm 30%
- (6) Company Code
- (7) Packaging : Tape Carrier Package

◆ **Dimensions**



Recommended Land Pattern



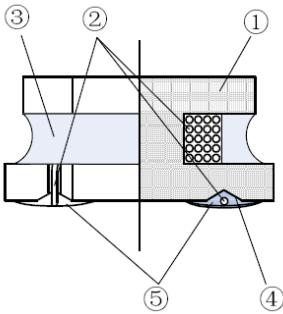
Unit:mm

| Series | A | B | C | D | E | F | a Typ. | b Typ. | c Typ. |
|-----------|---------------|---------------|---------|---------------|----------------|----------------|--------|--------|--------|
| CMLW6045S | 6.0 \pm 0.3 | 6.0 \pm 0.3 | 4.5Max. | 4.9 \pm 0.3 | 1.55 \pm 0.3 | 2.90 \pm 0.3 | 2.8 | 1.7 | 5.7 |

◆ **Electrical Characteristics**

- 1) Operating and storage temperature range (individual chip without packing): cking): $-25^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- 2) Storage temperature range (packaging conditions): $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$ and RH 70% (Max.)

◆ **Construction and material**



| Code | Part Name | Material Name |
|------|--------------------|--|
| ① | Ferrite Core | Ni-Zn Ferrite |
| ② | Wire | Polyurethane system enameled copper wire |
| ③ | Magnetic Glue | Epoxy resin and magnetic powder |
| ④ | Plating Electrodes | Ag |
| | | Ni |
| | | Sn |
| ⑤ | Outer Electrodes | Top surface solder coating Sn、Ag、Cu |

◆ **REFLOW-PROFILE**

Limit Profile



Standard Profile (for EOC Solder paste S70G-HF)



◆ **Specification**

| Part Number | Inductance @100KHz, 1V (μ H) | DC Resistance $\pm 30\%$ (Ω) | Min.Self-resonant Frequency (MHz) | Saturation Current(A) | Heat Rating Current (A) |
|-------------------------|---|--|--------------------------------------|--------------------------|----------------------------|
| | | DCR | S.R.F | Isat | Irms |
| CMLW6045S Series | | | | | |
| CMLW6045SR82NST | 0.82 \pm 30% | 0.008 | 140 | 10.40 | 5.90 |
| CMLW6045S1R0NST | 1.0 \pm 30% | 0.011 | 100 | 9.85 | 5.14 |
| CMLW6045S1R5NST | 1.5 \pm 30% | 0.012 | 65 | 8.80 | 4.95 |
| CMLW6045S1R8MST | 1.8 \pm 20% | 0.012 | 74 | 7.60 | 4.95 |
| CMLW6045S2R2MST | 2.2 \pm 20% | 0.014 | 52 | 6.75 | 4.60 |
| CMLW6045S3R3MST | 3.3 \pm 20% | 0.021 | 32 | 5.90 | 3.70 |
| CMLW6045S3R6MST | 3.6 \pm 20% | 0.021 | 28 | 5.25 | 3.70 |
| CMLW6045S4R7MST | 4.7 \pm 20% | 0.026 | 24 | 5.00 | 3.35 |
| CMLW6045S5R6MST | 5.6 \pm 20% | 0.029 | 23 | 4.15 | 3.15 |
| CMLW6045S6R8MST | 6.8 \pm 20% | 0.031 | 20 | 3.90 | 3.00 |
| CMLW6045S8R2MST | 8.2 \pm 20% | 0.043 | 21 | 3.90 | 2.60 |
| CMLW6045S100MST | 10 \pm 20% | 0.048 | 15 | 3.20 | 2.45 |
| CMLW6045S120MST | 12 \pm 20% | 0.058 | 13 | 2.80 | 2.20 |
| CMLW6045S150MST | 15 \pm 20% | 0.068 | 12 | 2.50 | 2.05 |
| CMLW6045S220MST | 22 \pm 20% | 0.089 | 10 | 2.05 | 1.80 |
| CMLW6045S330MST | 33 \pm 20% | 0.137 | 7.8 | 1.65 | 1.45 |
| CMLW6045S470MST | 47 \pm 20% | 0.200 | 6.4 | 1.40 | 1.20 |
| CMLW6045S560MST | 56 \pm 20% | 0.221 | 6.4 | 1.30 | 1.10 |
| CMLW6045S680MST | 68 \pm 20% | 0.289 | 6.4 | 1.20 | 1.00 |
| CMLW6045S820MST | 82 \pm 20% | 0.341 | 4.9 | 1.05 | 0.90 |
| CMLW6045S101MST | 100 \pm 20% | 0.433 | 4.2 | 0.95 | 0.80 |
| CMLW6045S121MST | 120 \pm 20% | 0.484 | 4.2 | 0.85 | 0.77 |
| CMLW6045S151MST | 150 \pm 20% | 0.580 | 4.2 | 0.80 | 0.70 |
| CMLW6045S221MST | 220 \pm 20% | 0.834 | 3.5 | 0.70 | 0.59 |
| CMLW6045S331MST | 330 \pm 20% | 1.270 | 2.8 | 0.57 | 0.57 |

◆ **Note**

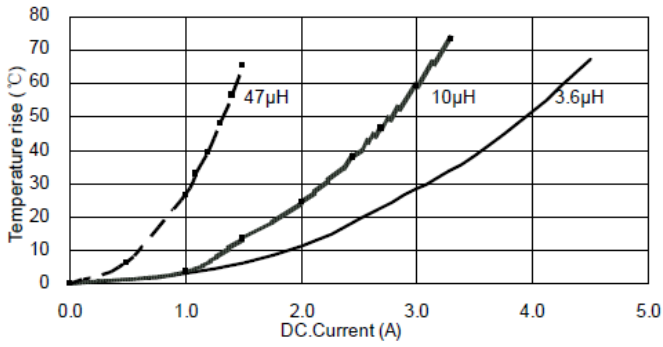
- 1: All test data is referenced to 20°C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4: Irms: DC current that causes the temperature rise ($\Delta T = 40^\circ C$) from 20°C ambient.

◆ **Standard Packing Quantity: 1500 pcs/reel**

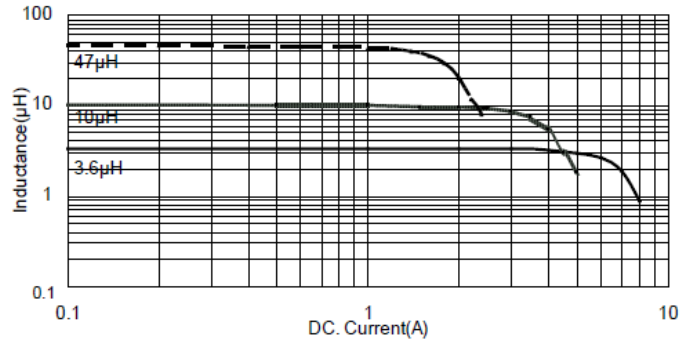
◆ TYPICAL ELECTRICAL CHARACTERISTICS

CMLW6045S Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics



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