



◆ **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**

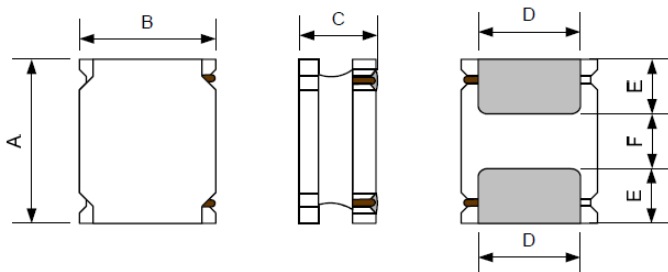
- 1、LED Lighting;
- 2、Mobile devices with multifunction such as adding color TV and camera;
- 3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
- 4、Notebooks, desktop computers, servers, graphic cards;
- 5、Portable gaming devices, personal navigation systems, personal multimedia devices;
- 6、Automotive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

◆ **Lead Free Part Numbering**

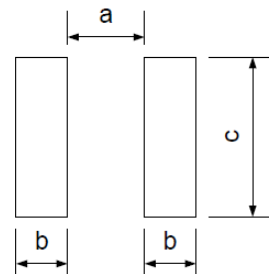
CMLW 3010 S 100 M S T
(1) (2) (3) (4) (5) (6) (7)

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

◆ **Dimensions**



Recommended Land Pattern



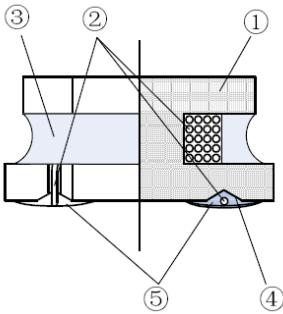
Unit:mm

| Series | A | B | C | D | E | F | a Typ. | b Typ. | c Typ. |
|-----------|---------|---------|---------|---------|----------|----------|--------|--------|--------|
| CMLW3010S | 3.0±0.2 | 3.0±0.2 | 1.0Max. | 2.5±0.2 | 0.75±0.2 | 1.50±0.2 | 1.5 | 0.8 | 2.7 |

◆ **Electrical Characteristics**

- 1) Operating temperature range (Including self-heating): -40°C ~ +125°C
- 2) Storage temperature range (packaging conditions): -10°C~+40°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 (μH) | DC Resistance | Min.Self-resonant Frequency (MHz) | Saturation Current(A) | Heat Rating Current (A) |
|-------------------------|-----------------------------------|-----------------|--------------------------------------|--------------------------|----------------------------|
| | | ±30% (Ω) DCR | S.R.F | Isat | Irms |
| CMLW3010S Series | | | | | |
| CMLW3010S1R0MST | 1.0±30% | 0.056 | 180 | 1.89 | 1.81 |
| CMLW3010S1R5MST | 1.5±30% | 0.068 | 120 | 1.71 | 1.63 |
| CMLW3010S2R2MST | 2.2±30% | 0.095 | 100 | 1.55 | 1.36 |
| CMLW3010S3R3MST | 3.3±30% | 0.124 | 74 | 1.31 | 1.20 |
| CMLW3010S4R7MST | 4.7±20% | 0.193 | 59 | 1.03 | 0.96 |
| CMLW3010S6R8MST | 6.8±20% | 0.261 | 42 | 0.89 | 0.83 |
| CMLW3010S100MST | 10±20% | 0.342 | 39 | 0.78 | 0.73 |
| CMLW3010S120MST | 12±20% | 0.432 | 36 | 0.69 | 0.65 |
| CMLW3010S150MST | 15±20% | 0.522 | 30 | 0.61 | 0.59 |
| CMLW3010S220MST | 22±20% | 0.796 | 28 | 0.48 | 0.48 |
| CMLW3010S330MST | 33±20% | 1.326 | 18 | 0.39 | 0.38 |
| CMLW3010S390MST | 39±20% | 1.497 | 18 | 0.38 | 0.35 |
| CMLW3010S470MST | 47±20% | 1.668 | 18 | 0.30 | 0.33 |
| CMLW3010S510MST | 51±20% | 1.881 | 18 | 0.29 | 0.31 |
| CMLW3010S560MST | 56±20% | 1.984 | 16 | 0.29 | 0.30 |

◆ **Note**

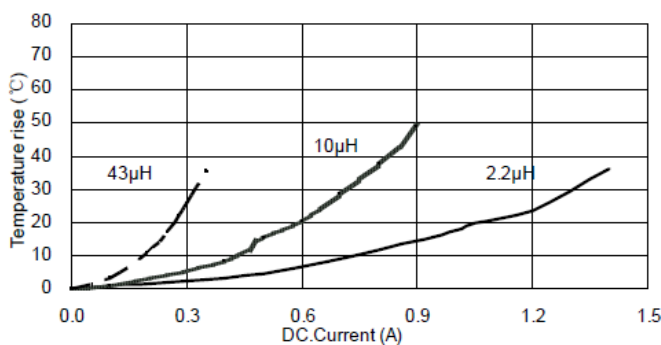
- 1: All test data is referenced to 20°C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4: Irms: DC current that causes the temperature rise ($\Delta T = 40^\circ C$) from 20°C ambient.

◆ **Standard Packing Quantity: 2000 pcs/reel**

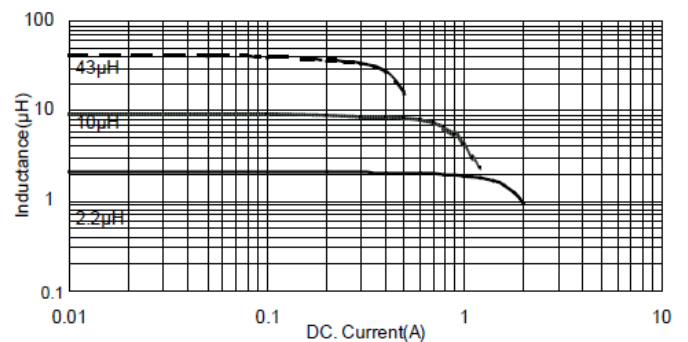
◆ **TYPICAL ELECTRICAL CHARACTERISTICS**

CMLW3010S Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics



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