



◆ **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**

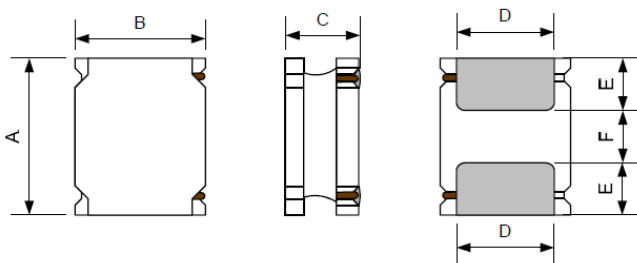
- 1、LED Lighting;
- 2、Mobile devices with multifunction such as adding color TV and camera;
- 3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
- 4、Notebooks, desktop computers, servers, graphic cards;
- 5、Portable gaming devices, personal navigation systems, personal multimedia devices;
- 6、Automotive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

◆ **Lead Free Part Numbering**

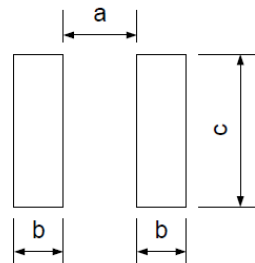
CMLW 5012 S 100 M S T
(1) (2) (3) (4) (5) (6) (7)

- (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. |
|------------------|---------|---------|---------|---------|----------|----------|--------|--------|--------|
| CMLW5012S | 5.0±0.2 | 5.0±0.2 | 1.2Max. | 4.0±0.2 | 1.25±0.2 | 2.50±0.2 | 2.3 | 1.4 | 4.2 |

◆ **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,1 V (μH) | DC Resistance ±30% (Ω) | Min.Self-resonaNST Frequency (MHz) | Saturation CurreNST(A) | Heat Rating CurreNST (A) |
|------------------------|-----------------------------------|---------------------------|---------------------------------------|---------------------------|-----------------------------|
| | | DCR | S.R.F | Isat | Irms |
| CMLW5012 Series | | | | | |
| CMLW5012S1R0MST | 1.0±20% | 0.057 | 103 | 4.40 | 2.90 |
| CMLW5012S1R5MST | 1.5±20% | 0.072 | 68 | 3.70 | 2.50 |
| CMLW5012S2R2MST | 2.2±20% | 0.085 | 50 | 3.10 | 2.10 |
| CMLW5012S3R3MST | 3.3±20% | 0.126 | 34 | 2.40 | 1.80 |
| CMLW5012S4R7MST | 4.7±20% | 0.164 | 31 | 2.20 | 1.65 |
| CMLW5012S6R8MST | 6.8±20% | 0.245 | 22 | 1.70 | 1.30 |
| CMLW5012S100MST | 10±20% | 0.344 | 17 | 1.40 | 1.10 |
| CMLW5012S150MST | 15±20% | 0.436 | 13 | 1.20 | 0.90 |

◆ **Note**

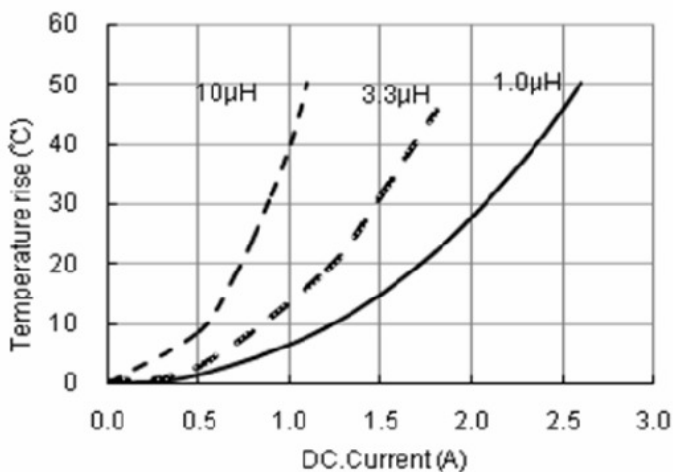
- 1: All test data is referenced to 20°C ambieNST;
- 2: Rated curreNST: Isat or Irms, whichever is smaller;
- 3: Isat: DC curreNST at which the inductance drops approximate 30% from its value without curreNST;
- 4: Irms: DC curreNST that causes the temperature rise (ΔT =40°C) from 20°C ambieNST.

◆ **Standard Packing Quantity: 1000 pcs/reel**

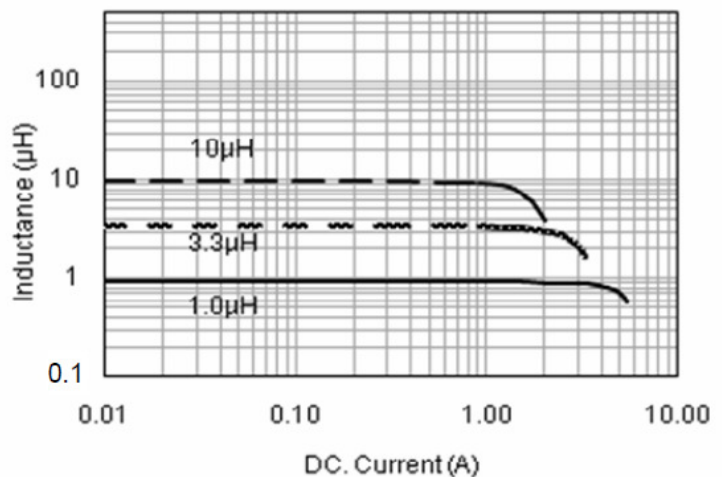
◆ **TYPICAL ELECTRICAL CHARACTERISTICS**

CMLW5012 Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics



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