



◆ **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

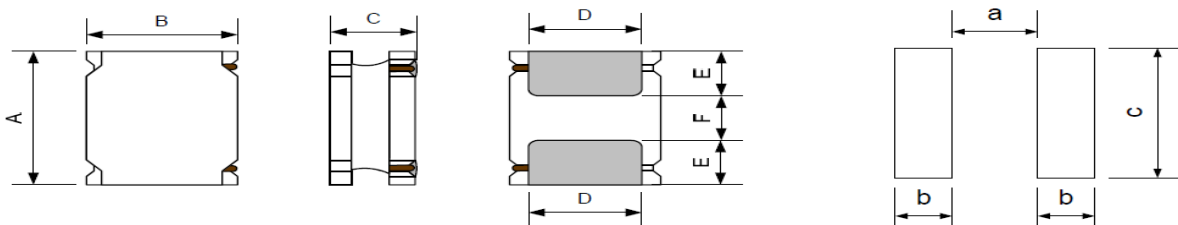
◆ **Lead Free Part Numbering**

**CMLW 252010 S 2R2 M S T**  
**(1) (2) (3) (4) (5) (6) (7)**

- (1) Series Type
- (2) Dimension: L ×W× H(2.5×2.0×1.0mm)
- (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. |
|------------|---------|---------|---------|---------|----------|----------|--------|--------|--------|
| CMLW252010 | 2.5±0.2 | 2.0±0.2 | 1.0Max. | 1.5±0.2 | 0.80±0.2 | 0.80±0.2 | 0.8    | 0.85   | 2.0    |

◆ **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<br>@100KHz,1V<br>( $\mu$ H) | DC Resistance( $\Omega$ ) |       | Saturation Current(A) |      | Heat Rating<br>Current (A) |
|--------------------------|--|---------------------------|-------|-----------------------|------|----------------------------|
|                          |  | Max.                      | Typ.  | Min.                  | Typ. | Typ.                       |
|                          |  | DCR                       |       | Isat                  |      | Irms                       |
| <b>CMLW252010 Series</b> |  |                           |       |                       |      |                            |
| CMLW252010SR47NST        | 0.47 $\pm$ 30%                         | 0.054                     | 0.045 | 2.80                  | 3.75 | 3.03                       |
| CMLW252010SR68NST        | 0.68 $\pm$ 30%                         | 0.072                     | 0.058 | 2.46                  | 3.08 | 2.42                       |
| CMLW252010S1R0MST        | 1.0 $\pm$ 20%                          | 0.110                     | 0.084 | 2.07                  | 2.46 | 1.98                       |
| CMLW252010S1R5MST        | 1.5 $\pm$ 20%                          | 0.174                     | 0.142 | 2.02                  | 2.35 | 1.60                       |
| CMLW252010S2R2MST        | 2.2 $\pm$ 20%                          | 0.199                     | 0.162 | 1.46                  | 1.79 | 1.32                       |
| CMLW252010S3R3MST        | 3.3 $\pm$ 20%                          | 0.312                     | 0.254 | 1.18                  | 1.46 | 1.10                       |
| CMLW252010S4R7MST        | 4.7 $\pm$ 20%                          | 0.536                     | 0.437 | 1.06                  | 1.29 | 0.88                       |
| CMLW252010S6R8MST        | 6.8 $\pm$ 20%                          | 0.854                     | 0.695 | 0.87                  | 1.03 | 0.79                       |
| CMLW252010S100MST        | 10 $\pm$ 20%                           | 1.050                     | 0.846 | 0.73                  | 0.87 | 0.64                       |

◆ **Note**

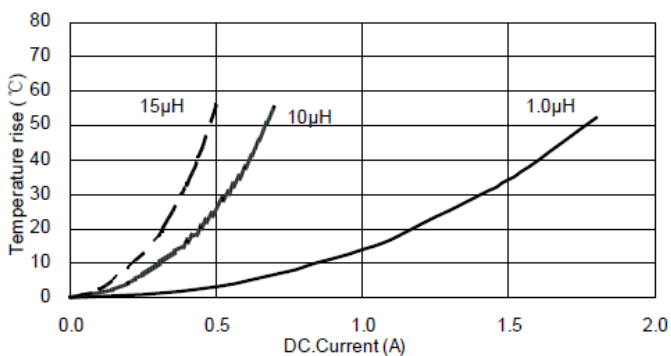
- 1: All test data is referenced to 20°C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4: Irms: DC current that causes the temperature rise ( $\Delta T = 40^\circ C$ ) from 20°C ambient.

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

◆ **TYPICAL ELECTRICAL CHARACTERISTICS**

**CMLW252010 Series**

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics

