



### ◆ 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

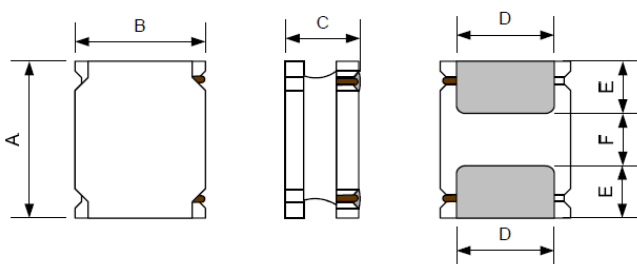
- 1、LED Lighting;
- 2、Mobile devices with multifunction such as adding color TV and camera;
- 3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
- 4、Notebooks, desktop computers, servers, graphic cards;
- 5、Portable gaming devices, personal navigation systems, personal multimedia devices;
- 6、Automotive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

### ◆ Lead Free Part Numbering

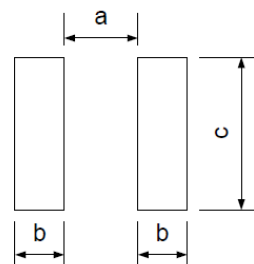
**CMLW 3015 S 100 M S T**  
**(1) (2) (3) (4) (5) (6) (7)**

- (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



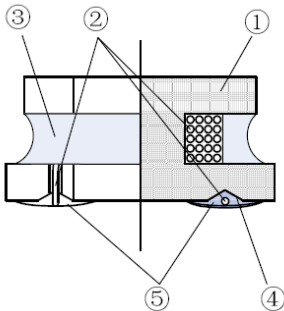
Unit:mm

| Series    | A       | B       | C       | D       | E        | F        | a Typ. | b Typ. | c Typ. |
|-----------|---------|---------|---------|---------|----------|----------|--------|--------|--------|
| CMLW3015S | 3.0±0.2 | 3.0±0.2 | 1.5Max. | 2.5±0.2 | 0.75±0.2 | 1.50±0.2 | 1.5    | 0.8    | 2.7    |

◆ **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.)

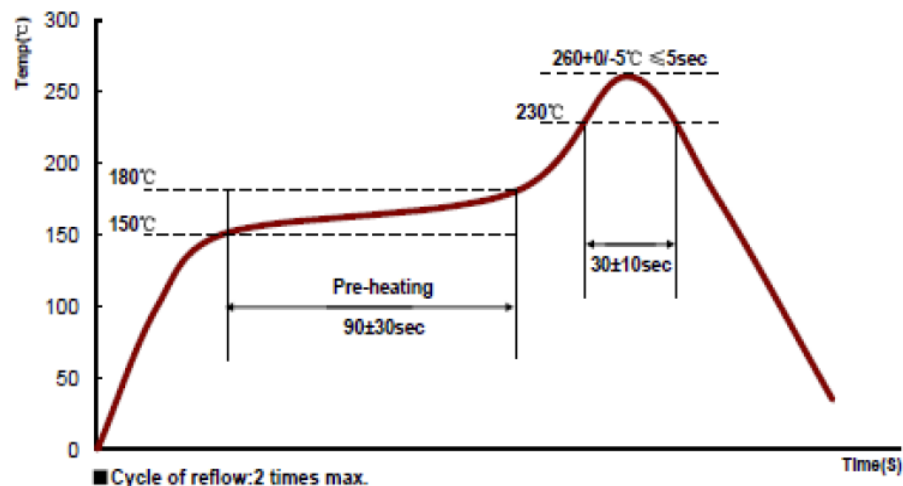
◆ **Construction and material**



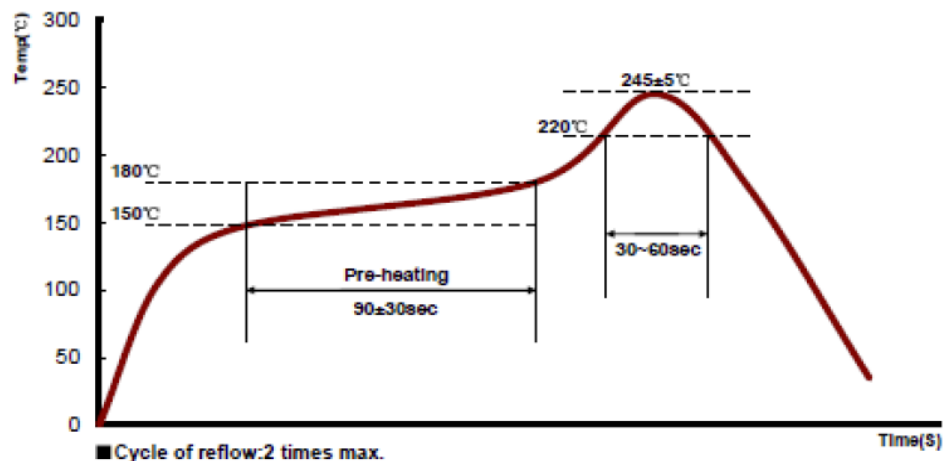
| Code | Part Name          | Material Name                            |
|------|--------------------|------------------------------------------|
| ①    | Ferrite Core       | Ni-Zn Ferrite                            |
| ②    | Wire               | Polyurethane system enameled copper wire |
| ③    | Magneic 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,<br>1V (μH) | DC Resistance<br>±30% (Ω) | Min.Self-resonant<br>Frequency (MHz) | Saturation<br>Current(A) | Heat Rating<br>Current (A) |
|-----------------|-----------------------------------|---------------------------|--------------------------------------|--------------------------|----------------------------|
|                 |                                   | DCR                       | S.R.F                                | Isat                     | Irms                       |
| CMLW3015 Series |                                   |                           |                                      |                          |                            |
| CMLW3015S1R0NST | 1.0±30%                           | 0.033                     | 150                                  | 2.73                     | 2.35                       |
| CMLW3015S1R5NST | 1.2±30%                           | 0.045                     | 100                                  | 2.73                     | 1.90                       |
| CMLW3015S2R2MST | 2.2±20%                           | 0.054                     | 86                                   | 1.95                     | 1.79                       |
| CMLW3015S2R7MST | 2.7±20%                           | 0.068                     | 64                                   | 1.80                     | 1.60                       |
| CMLW3015S3R3MST | 3.3±20%                           | 0.072                     | 68                                   | 1.62                     | 1.52                       |
| CMLW3015S4R7MST | 4.7±20%                           | 0.113                     | 46                                   | 1.41                     | 1.22                       |
| CMLW3015S5R1MST | 5.1±20%                           | 0.113                     | 49                                   | 1.28                     | 1.22                       |
| CMLW3015S6R2MST | 6.2±20%                           | 0.176                     | 46                                   | 1.19                     | 0.96                       |
| CMLW3015S6R8MST | 6.8±20%                           | 0.180                     | 39                                   | 1.03                     | 0.95                       |
| CMLW3015S100MST | 10±20%                            | 0.225                     | 41                                   | 0.97                     | 0.86                       |
| CMLW3015S120MST | 12±20%                            | 0.288                     | 32                                   | 0.83                     | 0.76                       |
| CMLW3015S150MST | 15±20%                            | 0.315                     | 30                                   | 0.78                     | 0.73                       |
| CMLW3015S180MST | 18±20%                            | 0.387                     | 23                                   | 0.66                     | 0.66                       |
| CMLW3015S220MST | 22±20%                            | 0.414                     | 23                                   | 0.62                     | 0.64                       |
| CMLW3015S330MST | 33±20%                            | 0.738                     | 20                                   | 0.53                     | 0.48                       |
| CMLW3015S390MST | 39±20%                            | 0.896                     | 14                                   | 0.48                     | 0.44                       |
| CMLW3015S470MST | 47±20%                            | 1.125                     | 14                                   | 0.41                     | 0.39                       |
| CMLW3015S560MST | 56±20%                            | 1.152                     | 13                                   | 0.39                     | 0.38                       |

◆ **Note**

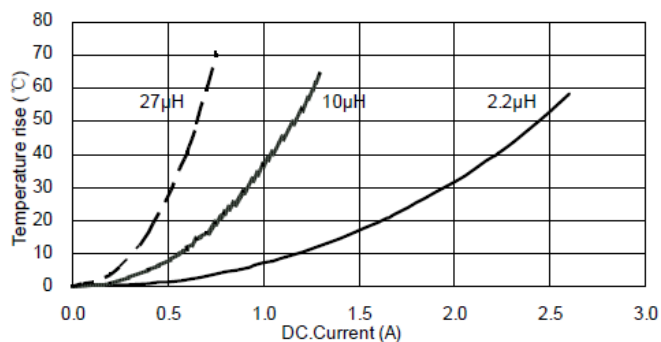
- 1: All test data is referenced to 20°C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4: Irms: DC current that causes the temperature rise ( $\Delta T = 40^\circ\text{C}$ ) from 20°C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

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

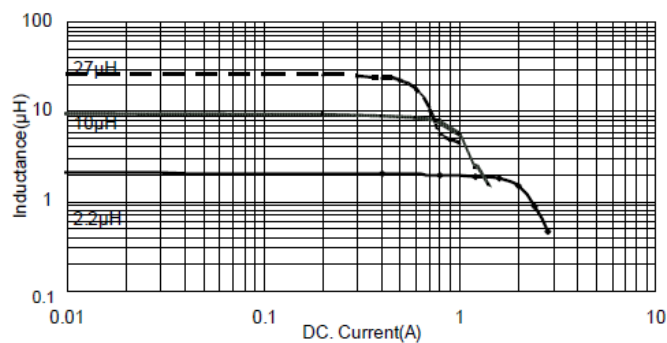
## ◆ TYPICAL ELECTRICAL CHARACTERISTICS

### CMLW3015 Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics



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