

## Wire Wound SMD Power Inductor



### ◆ 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
- 4、Small and low profile inductor;
- 5、Take up less PCB real estate and save more power。



### ◆ Applications

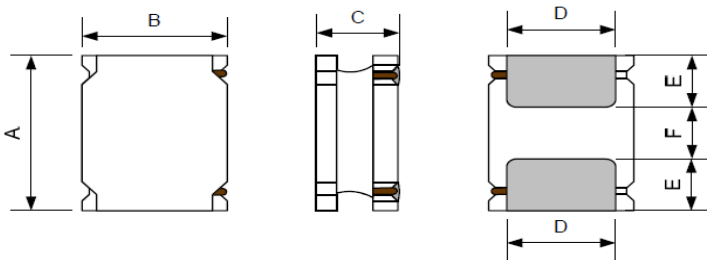
- 1、Smart phone;
- 2、Mobile devices with multifunction such as adding color TV and camera;
- 3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
- 4、Notebooks, desktop computers, servers, graphic cards;
- 5、Portable gaming devices, personal navigation systems, personal multimedia devices;
- 6、Automotive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

### ◆ Lead Free Part Numbering

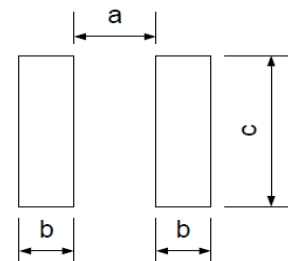
**SLW 4020 P 2R2 M S T**  
**(1) (2) (3) (4) (5) (6) (7)**

- (1) Series Type
- (2) Dimension : L×W×H(4.0×4.0×1.2mm)
- (3) Material Code
- (4) Inductance: R47=0.47μH ;  
2R2=2.2μH; 100=10μH
- (5) Inductance Tolerance: M=±20%, N=±30%
- (6) Company Code
- (7) Packaging : Tape Carrier Package

### ◆ Dimensions



#### Recommended Land Pattern



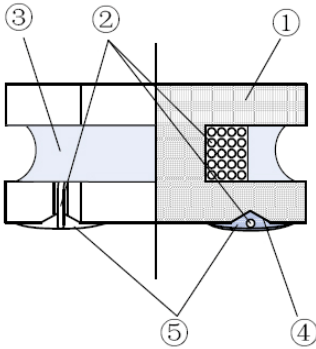
Unit:mm

| Series   | A       | B       | C        | D       | E        | F        | a Typ. | b Typ. | c Typ. |
|----------|---------|---------|----------|---------|----------|----------|--------|--------|--------|
| SLW4020P | 4.0±0.2 | 4.0±0.2 | 2.0 Max. | 3.3±0.2 | 0.95±0.2 | 2.10±0.2 | 1.90   | 1.10   | 3.7    |

## ◆ 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.)

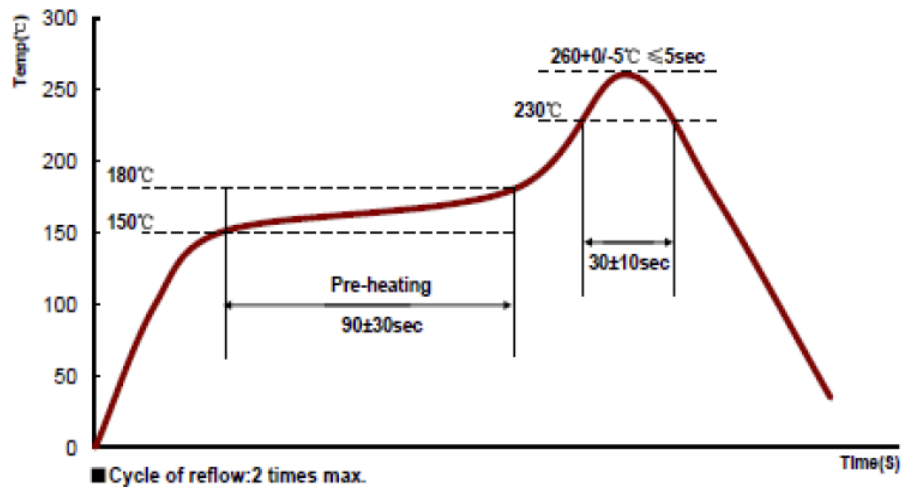
## ◆ Construction and material



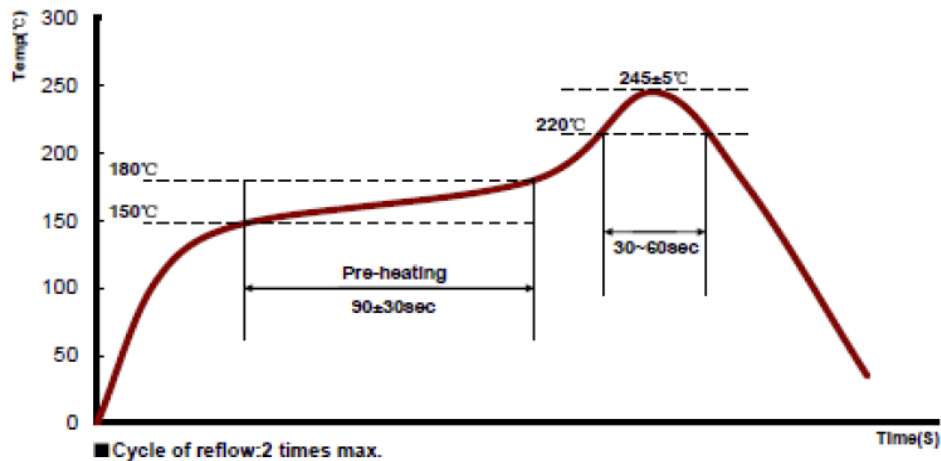
| No. | Components     | Material                                 |
|-----|----------------|--|
| ①   | Core           | Soft magnetic Metal                      |
| ②   | Wire           | Polyurethane system enameled copper wire |
| ③   | Magnetic Glue  | Epoxy resin and magnetic powder          |
| ④   | substrate      | FeNiCu/Ag or Ag/Ni/Sn                    |
| ⑤   | Top Electrodes | Sn alloy                                 |
| ⑥   | Marking        | Nitrocellulose                           |

## ◆ REFLOW-PROFILE

Limit Profile



Standard Profile (for EOC Solder paste S70G-HF)



## ◆ Specification

| Part Number            | Inductance<br>@100KHz,1V<br>( $\mu\text{H}$ ) | DC Resistance( $\text{m}\Omega$ ) |      | Saturation Current<br>Typ. (A) | Heat Rating Current<br>Typ. (A) |
|------------------------|---|-----------------------------------|------|--------------------------------|---------------------------------|
|                        |   | Max.                              | Typ. |                                |                                 |
|                        |   | DCR                               |      | Isat                           | Irms                            |
| <b>SLW4012P Series</b> |   |                                   |      |                                |                                 |
| SLW4020P1R0MST         | 1.00 $\pm$ 20%                                | 36                                | 30   | 7.70                           | 4.50                            |
| SLW4020P1R5MST         | 1.50 $\pm$ 20%                                | 46                                | 39   | 7.00                           | 4.00                            |
| SLW4020P2R2MST         | 2.20 $\pm$ 20%                                | 60                                | 50   | 6.50                           | 3.70                            |
| SLW4020P3R3MST         | 3.30 $\pm$ 20%                                | 96                                | 80   | 5.50                           | 2.50                            |
| SLW4020P4R7MST         | 4.70 $\pm$ 20%                                | 132                               | 105  | 4.90                           | 2.30                            |
| SLW4020P6R8MST         | 6.80 $\pm$ 20%                                | 180                               | 150  | 3.00                           | 1.80                            |
| SLW4020P100MST         | 10.00 $\pm$ 20%                               | 228                               | 190  | 2.80                           | 1.50                            |
| SLW4020P220MST         | 22.00 $\pm$ 20%                               | 576                               | 480  | 2.00                           | 1.10                            |

### ◆ Note

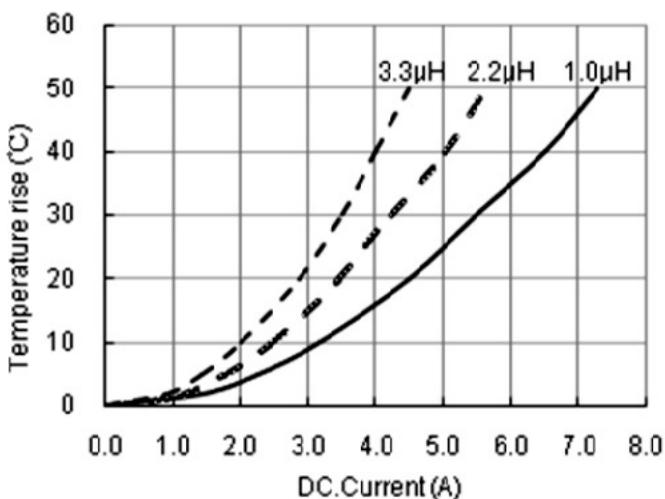
- 1: All test data is referenced to 20°C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4: Irms: DC current that causes the temperature rise ( $\Delta T = 40^\circ\text{C}$ ) from 20°C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

## ◆ Standard Packing Quantity: 3000 pcs/reel

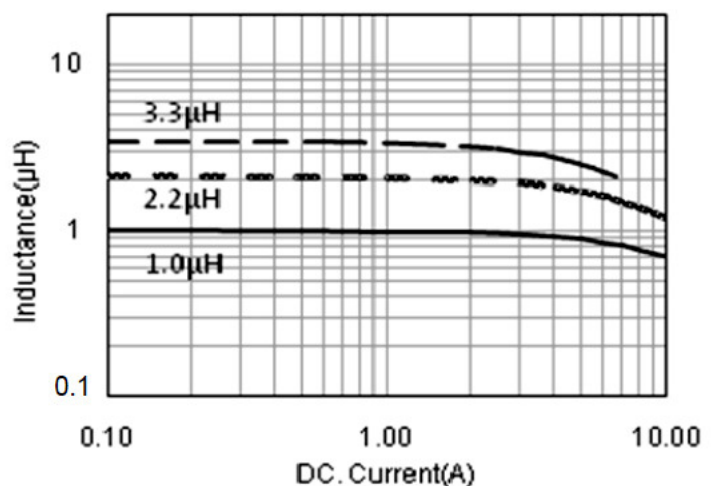
## ◆ TYPICAL ELECTRICAL CHARACTERISTICS

### CMLW4020P Series

Temperature vs.DC Current Characteristics



Inductance vs.DC Current Characteristics



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