

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

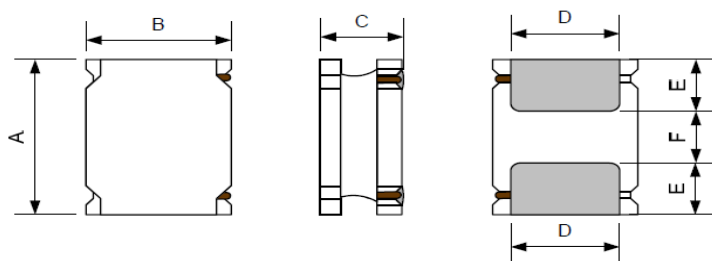
- 1、Smart phone;
- 2、Mobile devices with multifunction such as adding color TV and camera;
- 3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
- 4、Notebooks, desktop computers, servers, graphic cards;
- 5、Portable gaming devices, personal navigation systems, personal multimedia devices;
- 6、Automotive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

◆ Lead Free Part Numbering

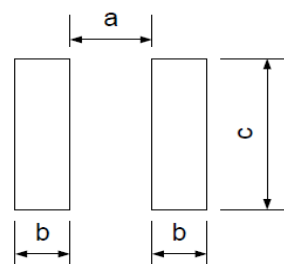
SLW 4012 P 2R2 M S T
(1) (2) (3) (4) (5) (6) (7)

- (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



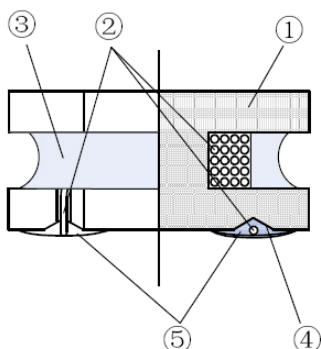
Unit:mm

| Series | A | B | C | D | E | F | a Typ. | b Typ. | c Typ. |
|----------|---------|---------|---------|---------|----------|----------|--------|--------|--------|
| SLW4012P | 4.0±0.2 | 4.0±0.2 | 1.2Max. | 3.3±0.2 | 0.95±0.2 | 2.10±0.2 | 1.90 | 1.10 | 3.7 |

◆ Electrical Characteristics

- 1) Operating temperature range (Including self-heating): $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- 2) Storage temperature range (packaging conditions): $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$ and RH 70% (Max.)

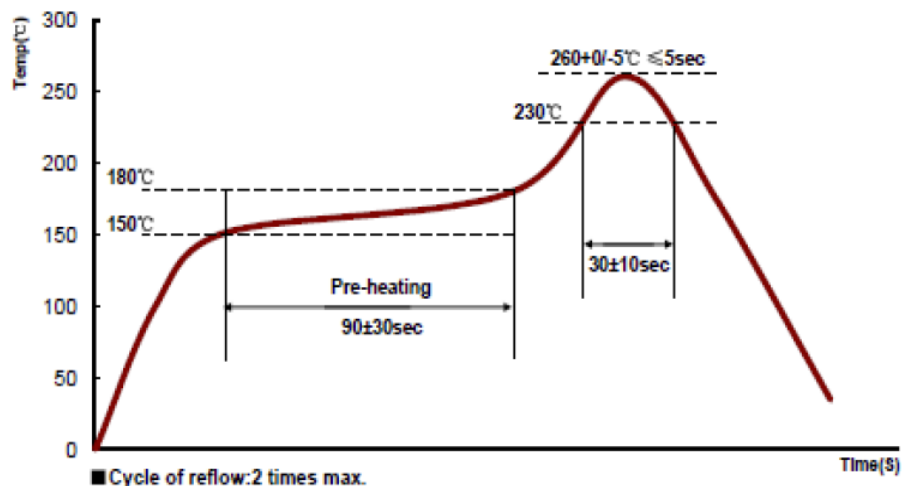
◆ Construction and material



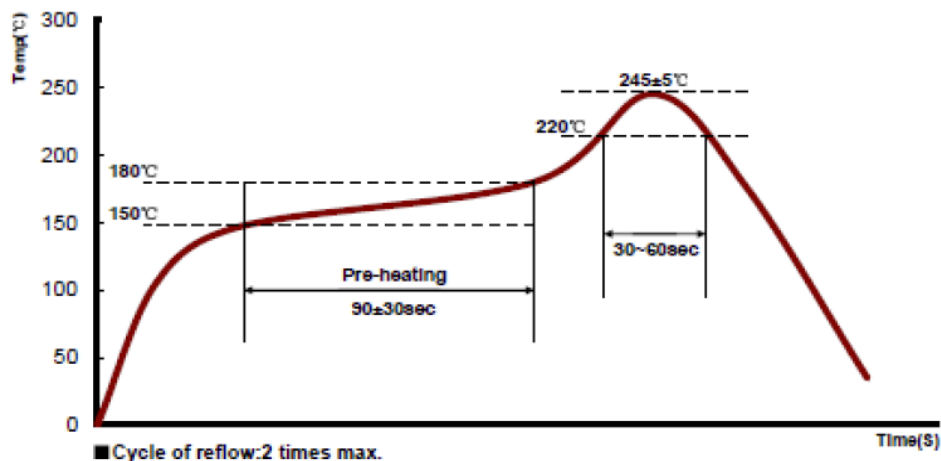
| Code | Part Name | Material Name |
|------|--------------------|--|
| ① | Ferrite Core | Ni-Zn Ferrite |
| ② | Wire | Polyurethane system enameled copper wire |
| ③ | Magnetic Glue | Epoxy resin and magnetic powder |
| ④ | Plating Electrodes | Ag |
| | | Ni |
| | | Sn |
| ⑤ | Outer Electrodes | Top surface solder coating Sn、Ag、Cu |

◆ REFLOW-PROFILE

Limit Profile



Standard Profile (for EOC Solder paste S70G-HF)



◆ Specification

| Part Number | Inductance @100KHz,1V (μH) | DC Resistance($\text{m}\Omega$) | | Saturation Current Typ. (A) | Heat Rating Current Typ. (A) |
|------------------------|---|-----------------------------------|------|--------------------------------|---------------------------------|
| | | Max. | Typ. | | |
| | | DCR | | Isat | Irms |
| SLW4012P Series | | | | | |
| SLW4012PR47MST | 0.47 \pm 20% | 43 | 36 | 7.50 | 3.70 |
| SLW4012PR68MST | 0.68 \pm 20% | 60 | 46 | 6.90 | 3.50 |
| SLW4012P1R0MST | 1.00 \pm 20% | 65 | 51 | 5.40 | 3.30 |
| SLW4012P1R5MST | 1.50 \pm 20% | 86 | 64 | 4.00 | 3.00 |
| SLW4012P2R2MST | 2.20 \pm 20% | 110 | 110 | 3.20 | 2.80 |
| SLW4012P3R3MST | 3.30 \pm 20% | 150 | 120 | 2.90 | 2.60 |
| SLW4012P4R7MST | 4.70 \pm 20% | 195 | 135 | 2.60 | 2.30 |
| SLW4012P6R8MST | 6.80 \pm 20% | 230 | 185 | 2.00 | 1.80 |
| SLW4012P100MST | 10.00 \pm 20% | 310 | 250 | 1.80 | 1.60 |
| SLW4012P150MST | 15.00 \pm 20% | 500 | 400 | 1.50 | 1.25 |
| SLW4012P220MST | 22.00 \pm 20% | 680 | 530 | 1.20 | 1.10 |

◆ Note

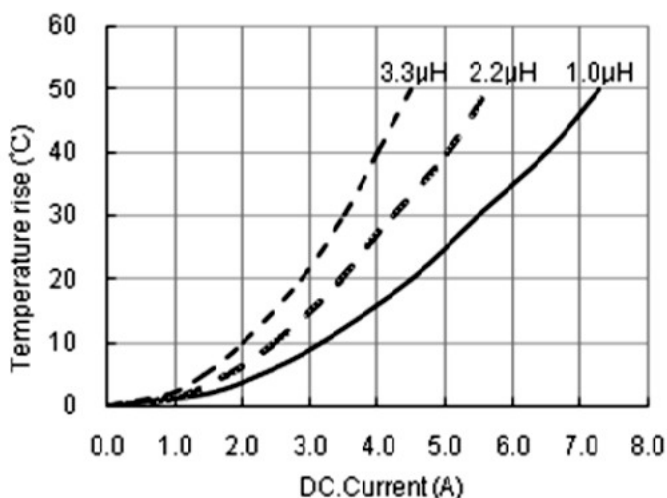
- 1: All test data is referenced to 20°C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4: Irms: DC current that causes the temperature rise ($\Delta T = 40^\circ\text{C}$) from 20°C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

◆ Standard Packing Quantity: 4000 pcs/reel

◆ TYPICAL ELECTRICAL CHARACTERISTICS

SLW4012P Series

Temperature vs.DC Current Characteristics



Inductance vs.DC Current Characteristics

