

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

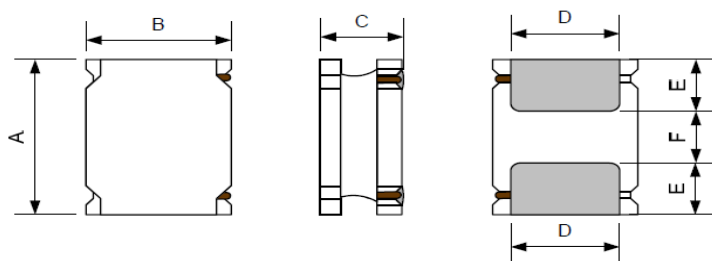
- 1、Smart phone;
- 2、Mobile devices with multifunction such as adding color TV and camera;
- 3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
- 4、Notebooks, desktop computers, servers, graphic cards;
- 5、Portable gaming devices, personal navigation systems, personal multimedia devices;
- 6、Automotive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

◆ Lead Free Part Numbering

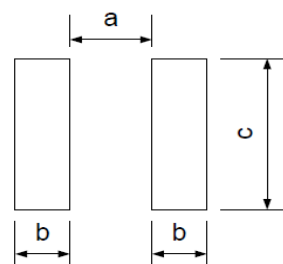
SLW 252012 P 2R2 M S T
(1) (2) (3) (4) (5) (6) (7)

- (1) Series Type
- (2) Dimension : L×W×H(2.5×2.0×1.2mm)
- (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



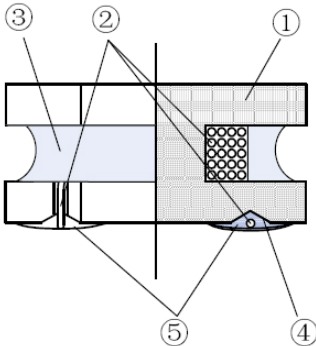
Unit:mm

| Series | A | B | C | D | E | F | a Typ. | b Typ. | c Typ. |
|------------|---------|---------|---------|---------|----------|----------|--------|--------|--------|
| SLW252012P | 2.5±0.2 | 2.0±0.2 | 1.2Max. | 1.5±0.2 | 0.80±0.2 | 0.80±0.2 | 0.80 | 0.85 | 2.0 |

◆ 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.)

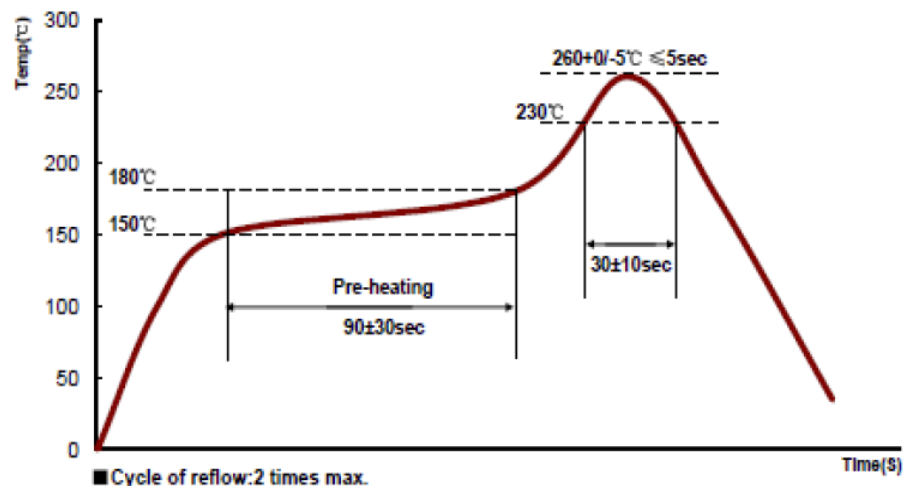
◆ Construction and material



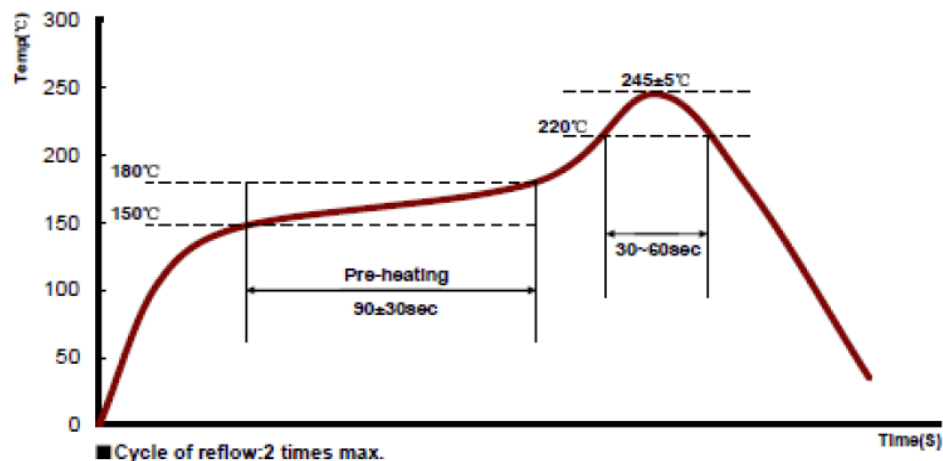
| No. | Components | Material |
|-----|----------------|--|
| ① | Core | Soft magnetic Metal |
| ② | Wire | Polyurethane system enameled copper wire |
| ③ | Magnetic Glue | Epoxy resin and magnetic powder |
| ④ | substrate | FeNiCu/Ag or Ag/Ni/Sn |
| ⑤ | Top Electrodes | Sn alloy |
| ⑥ | Marking | Nitrocellulose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

◆ REFLOW-PROFILE

Limit Profile



Standard Profile (for EOC Solder paste S70G-HF)



◆ Specification

| Part Number | Inductance @100KHz, 1V (μH) | DC Resistance($\text{m}\Omega$) | | Saturation Current Isat | | Heat Rating Current Irms | |
|--------------------------|--|-----------------------------------|------|----------------------------|----------|-----------------------------|----------|
| | | DCR | | Min(A) | Typ. (A) | Min(A) | Typ. (A) |
| | | Typ. | Max. | | | | |
| SLW252012P Series | | | | | | | |
| SLW252012PR24MST | 0.24 \pm 20% | 19 | 23 | 7.00 | 8.50 | 4.05 | 4.70 |
| SLW252012PR33MST | 0.33 \pm 20% | 23 | 28 | 6.00 | 7.00 | 3.7 | 4.30 |
| SLW252012PR47MST | 0.47 \pm 20% | 29 | 35 | 5.10 | 5.80 | 3.45 | 4.00 |
| SLW252012PR68MST | 0.68 \pm 20% | 36 | 43 | 3.90 | 4.50 | 3.15 | 3.60 |
| SLW252012P1R0MST | 1.0 \pm 20% | 48 | 54 | 3.70 | 4.30 | 3.0 | 3.40 |
| SLW252012P1R5MST | 1.5 \pm 20% | 60 | 72 | 2.90 | 3.50 | 2.4 | 2.80 |
| SLW252012P2R2MST | 2.2 \pm 20% | 100 | 120 | 2.60 | 3.00 | 1.9 | 2.15 |
| SLW252012P3R3MST | 3.3 \pm 20% | 136 | 163 | 1.70 | 2.10 | 1.8 | 2.05 |
| SLW252012P4R7MST | 4.7 \pm 20% | 225 | 260 | 1.60 | 1.90 | 1.25 | 1.45 |
| SLW252012P6R8MST | 6.8 \pm 20% | 305 | 366 | 1.15 | 1.35 | 0.95 | 1.10 |
| SLW252012P100MST | 10 \pm 20% | 450 | 500 | 1.10 | 1.35 | 0.85 | 1.00 |

◆ Note

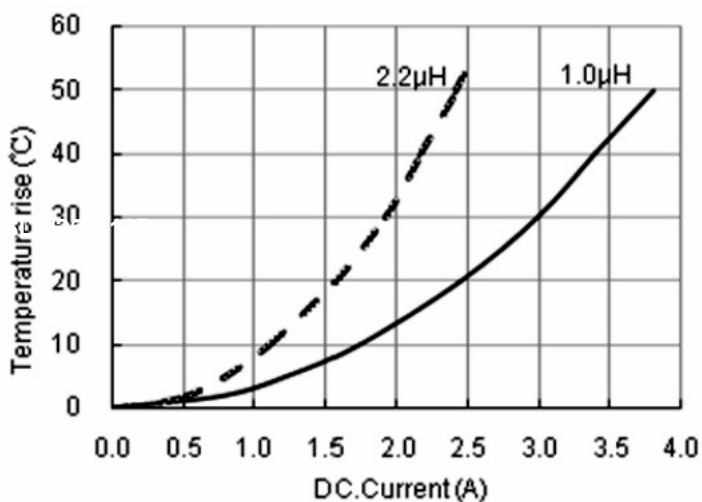
- 1: All test data is referenced to 20°C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 4: Irms: DC current that causes the temperature rise ($\Delta T = 40^\circ\text{C}$) from 20°C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

◆ Standard Packing Quantity: 2000 pcs/reel

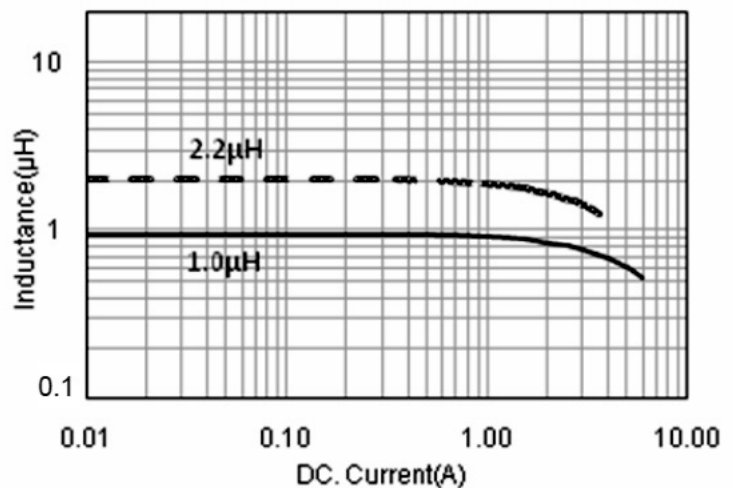
◆ TYPICAL ELECTRICAL CHARACTERISTICS

SLW252012P Series

Temperature vs.DC Current Characteristics



Inductance vs.DC Current Characteristics



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