

Wire Wound SMD Power Inductor



◆ Features

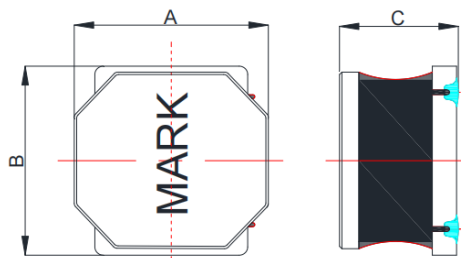
- 1、Magnetic-resin shielded construction reduces buzz noise to ultra-low levels;
- 2、Metallization on ferrite core results in excellent shock resistance and damage-free durability;
- 3、Closed magnetic circuit design reduces leakage flux and Electro Magnetic Interference (EMI);
- 4、30% higher current 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

◆ Dimensions

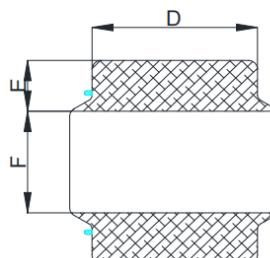


◆ Lead Free Part Numbering

SLW 8065 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=2.2 μ H ;
100=10 μ H; 101=100 μ H
- (5) Inductance Tolerance: M= $\pm$ 20%, N= $\pm$ 30%
- (6) Company Code
- (7) Packaging : Tape Carrier Package

Recommended Land Pattern



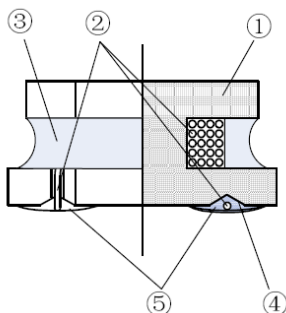
Series	A	B	C	D	E	F
SLW8065S	8.0 $\pm$ 0.3	8.0 $\pm$ 0.3	6.4 $\pm$ 0.2	6.3 $\pm$ 0.3	2.0 $\pm$ 0.3	4.0 $\pm$ 0.3

Unit:mm

◆ 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.)

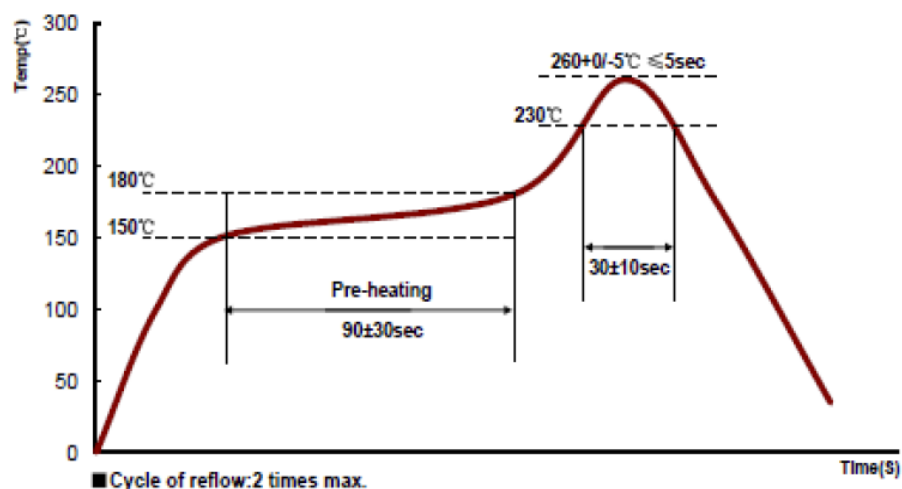
◆ Construction and material



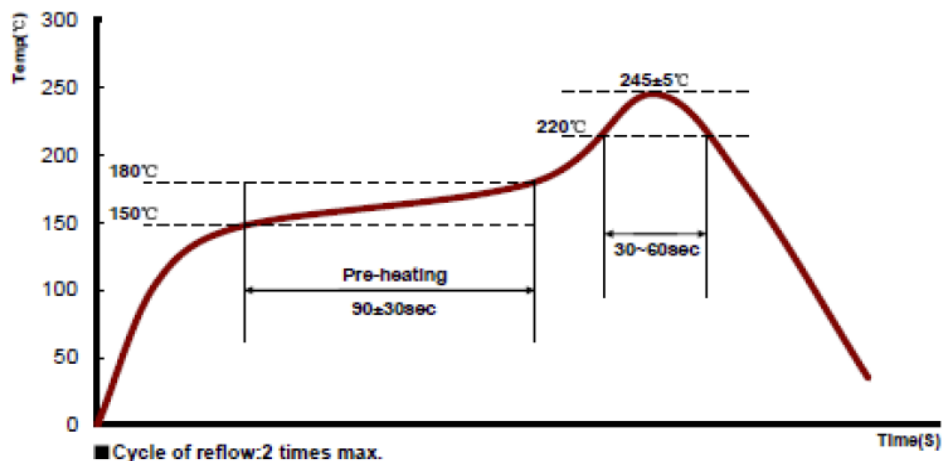
Code	Part Name	Material Name
①	Ferrite Core	Ni-Zn Ferrite
②	Wire	Polyurethane system enameled copper wire
③	Magnetic Glue	Epoxy resin and magnetic powder
④	Plating Electrodes	Ag
		Ni
		Sn
⑤	Outer Electrodes	Top surface solder coating Sn, Ag, Cu

◆ REFLOW-PROFILE

Limit Profile



Standard Profile (for EOC Solder paste S70G-HF)



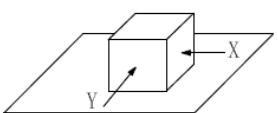
◆ Specification

Part Number	Inductance @100KHz,0.25 V (μH)	DCR (Ω)	S.R.F (MHz)	Isat (A)	Irms (A)
		Max.	Min.	Max.	Max.
SLW8065S1R0MST	1.0 ± 20%	0.011	96	20.0	7.00
SLW8065S3R3MST	3.3 ± 20%	0.018	27	9.50	5.10
SLW8065S4R7MST	4.7 ± 20%	0.022	18	8.50	4.70
SLW8065S6R8MST	6.8 ± 20%	0.026	16	7.50	4.50
SLW8065S8R2MST	8.2 ± 20%	0.031	15	7.00	4.20
SLW8065S100MST	10 ± 20%	0.044	13	8.00	3.20
SLW8065S220MST	22 ± 20%	0.065	8	4.30	2.85
SLW8065S330MST	33 ± 20%	0.107	10	3.5	2.3
SLW8065S470MST	47 ± 20%	0.156	8.5	3.0	2.2
SLW8065S680MST	68 ± 20%	0.234	6.6	2.0	1.55
SLW8065S820MST	82 ± 20%	0.300	5.8	2.5	1.4
SLW8065S101MST	100 ± 20%	0.390	5.5	2.3	1.3
SLW8065S151MST	150 ± 20%	0.575	4.5	1.8	1.0
SLW8065S221MST	220 ± 20%	0.656	3.6	1.2	1.0
SLW8065S102MST	1000 ± 20%	2.820	1.1	0.65	0.40
SLW8065S152MST	1500 ± 20%	4.380	0.7	0.54	0.32
SLW8065S222MST	2200 ± 20%	6.000	0.7	0.45	0.27

◆ Note

- 1: All test data is referenced to 20° C ambient;
- 2: Rated current: Isat or Irms, whichever is smaller;
- 3: Absolute maximum voltage 50VDC
- 4: Isat: DC current at which the inductance drops approximate 30% from its value without current;
- 5: Irms: DC current that causes the temperature rise ($\Delta T = 40^{\circ}$ C) from 20° C ambient;
- 6: Operating temperature -45° C ~ $+125^{\circ}$ C.

◆ Reliability Test

Items	Requirements	Test Methods and Remarks
A. Terminal Strength	No removal or split of the termination or other defects shall occur.  Fig.7.1-1	1) Solder the inductor to the testing jig (glass epoxy board shown in Fig.7.1-1) using eutectic solder. Then apply a force in the direction of the arrow. 2) 10N force. 3) Keep time: 5±2s
B. High Temperature	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Storage Temperature :125+/-5°C 2) Duration : 96 ±4 Hours 3) Recovery : then measured at room ambient temperature after placing 24 hours.
C. Low Temperature	1. No visible mechanical damage 2. Inductance change: Within ±10%	1) Temperature and time: -40±5°C 2) Duration: 96±4 hours 3) TRecovery : then measured at room ambient temperature after placing 24 hours.
D. Vibration test	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Frequency range:10HZ~55HZ~10HZ 2) Amplitude:1.5mm p-p 3) Direction:X,Y,Z 4) Time:1 minute/cycle,2hours per axis
E. High Temperature Storage Tested	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Storage Temperature :60+/-2°C 2) Relative Humidity :90-95% RH 3) Duration : 96 ±4 Hours 4) Recovery : then measured at room ambient temperature after placing 24 hours.
F. Resistance to Soldering Heat	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Re-flowing Profile: Please refer to Fig. 1 2) Test board thickness: 1.0mm 3) Test board material: glass epoxy resin 4) The chip shall be stabilized at normal condition for 1~2 hours before measuring
G. Thermal Shock	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Temperature and time: -40±3°C for 30±3 min→105°C for 30±3min, please refer to Fig. 2. 2) Transforming interval: Max, 3 minute 3) Tested cycle: 100 cycles 4) The chip shall be stabilized at normal condition for 1~2 hours before measuring

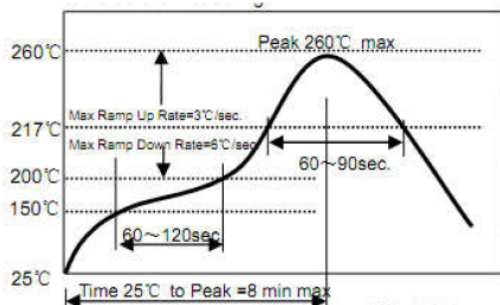


Fig. 1

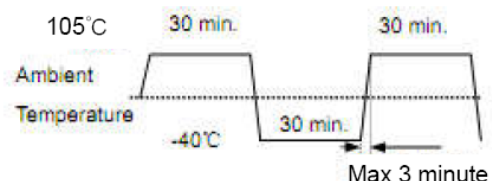
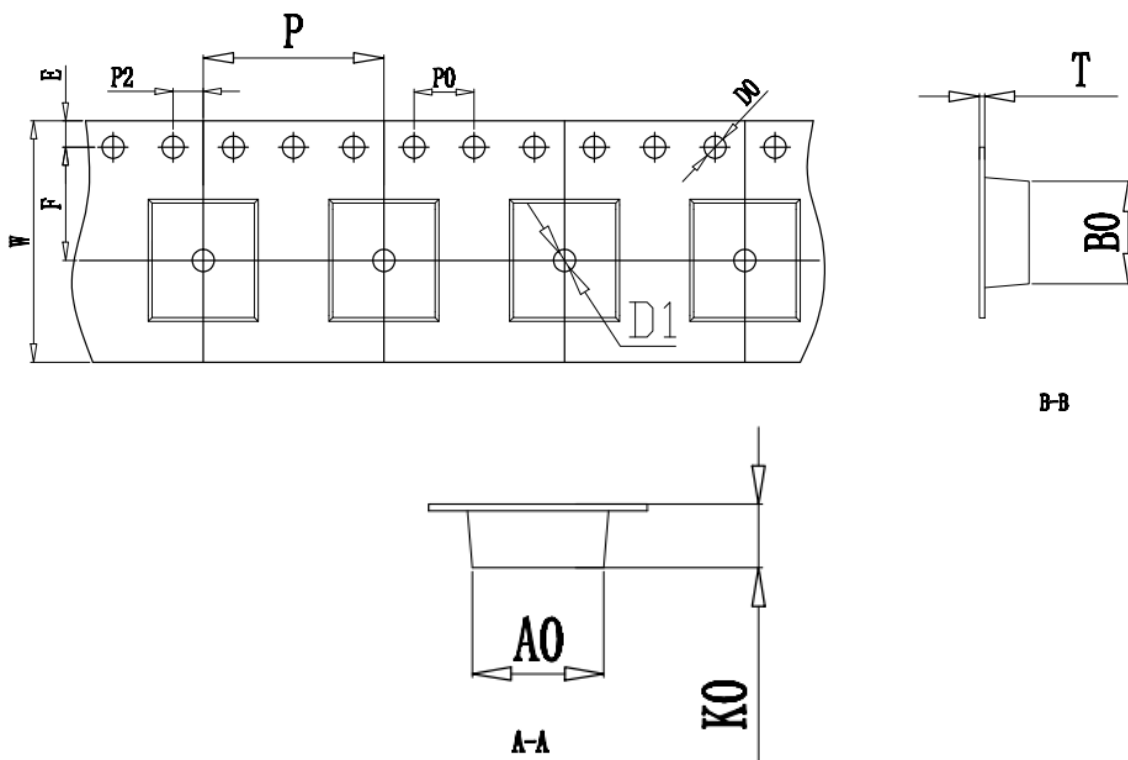


Fig. 2

◆Packaging and Marking:


ITEM	W	A0	B0	K0	P	F	E	D0	D1	P0	P2	T
DIM	16.00	8.3	8.3	6.8	12.0	7.50	1.75	1.50	1.50	4.00	2.00	0.40
TOLE	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.1	+0.1	±0.1	±0.1	±0.05

Packaging Quantity: 700PCS/REEL