SLW8065S Series

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

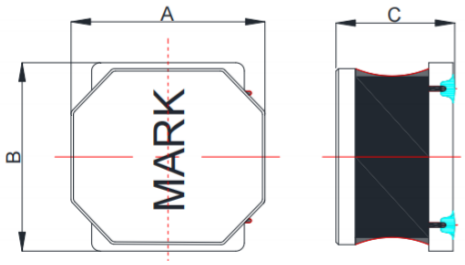
1、LED Lighting;
2、Mobile devices with multifunction such as adding color TV and camera;
3、Flat-screen TVs, blue-ray disc recorders, set top boxes;
4、Notebooks, desktop computers, servers, graphic cards;
5、Portable gaming devices, personal navigation systems, personal multimedia devices;
6、Automotive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

◆ Lead Free Part Numbering

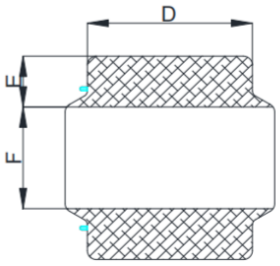
SLW	8065	S	100	M	S	T
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Series Type
(2) Dimension：L X H
(3) Material Code
(4) Inductance：2R2=2.2μH ;
100=10μH；101=100μH
(5) Inductance Tolerance：M=±20%, N=±30%
(6) Company Code
(7) Packaging：Tape Carrier Package

◆ Dimensions



Recommended Land Pattern



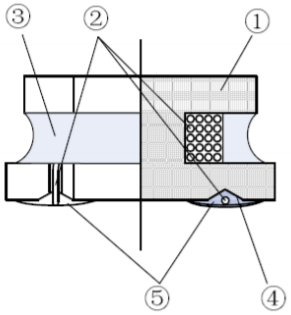
Series	A	B	C	D	E	F
SLW8065S	8.0±0.3	8.0±0.3	6.4±0.2	6.3±0.3	2.0±0.3	4.0±0.3

Unit:mm

◆ Electrical Characteristics

1) Operating temperature range（Including self-heating)：-40℃ ~ +125℃
2) Storage temperature range (packaging conditions): -10℃~+40℃ and RH 70% (Max.)

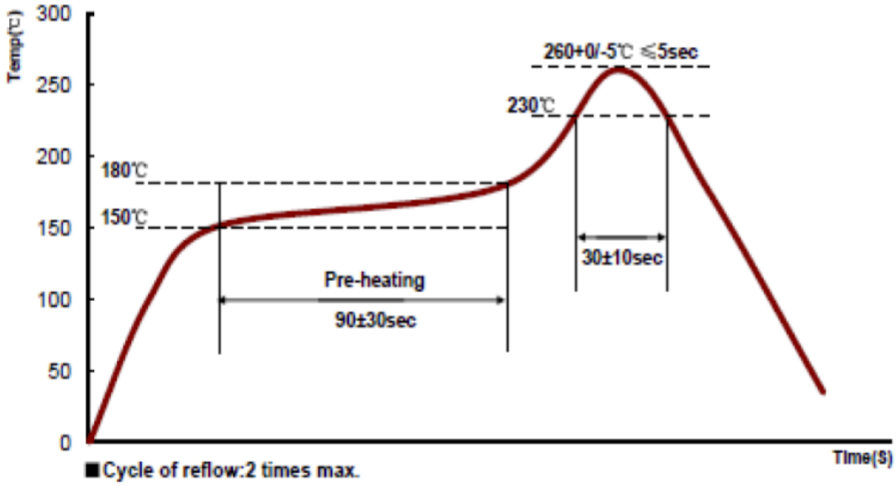
◆ Construction and material



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

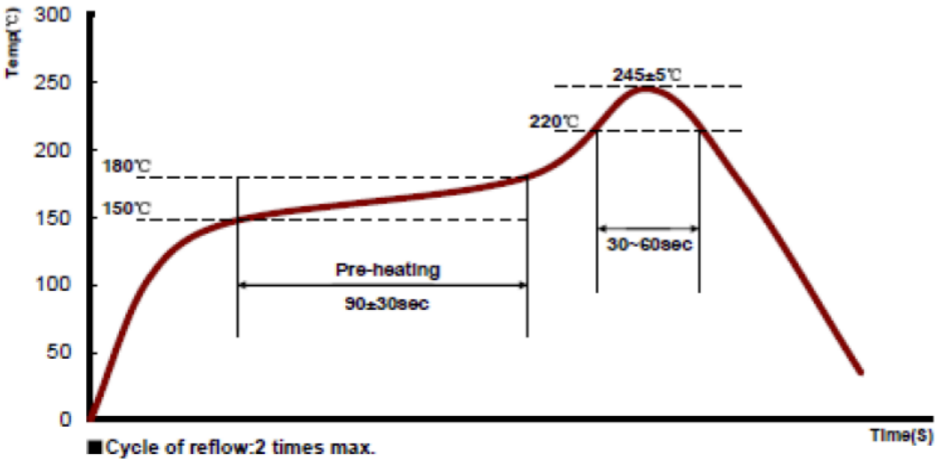
◆ REFLOW-PROFILE

Limit Profile



■Cycle of reflow:2 times max.

Standard Profile (for EOC Solder paste S70G-HF)



■Cycle of reflow:2 times max.

◆ 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
SLW8065S2R2MST	2.2±20%	0.016	33	10.0	6.80
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
SLW8065S150MST	15±20%	0.060	12	5.50	4.20
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
SLW8065S331MST	330±20%	0.780	2.2	2.9	2.0
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;

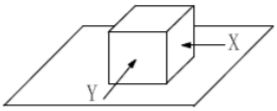
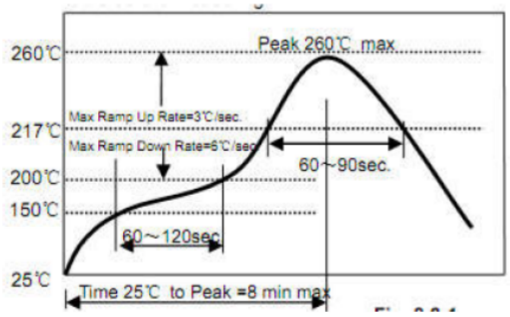
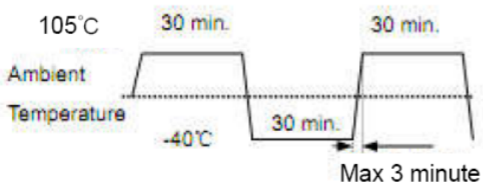
3：Absolute maximum voltage 50VDC

4：Isat: DC current at which the inductance drops approximate 30% from its value without current;

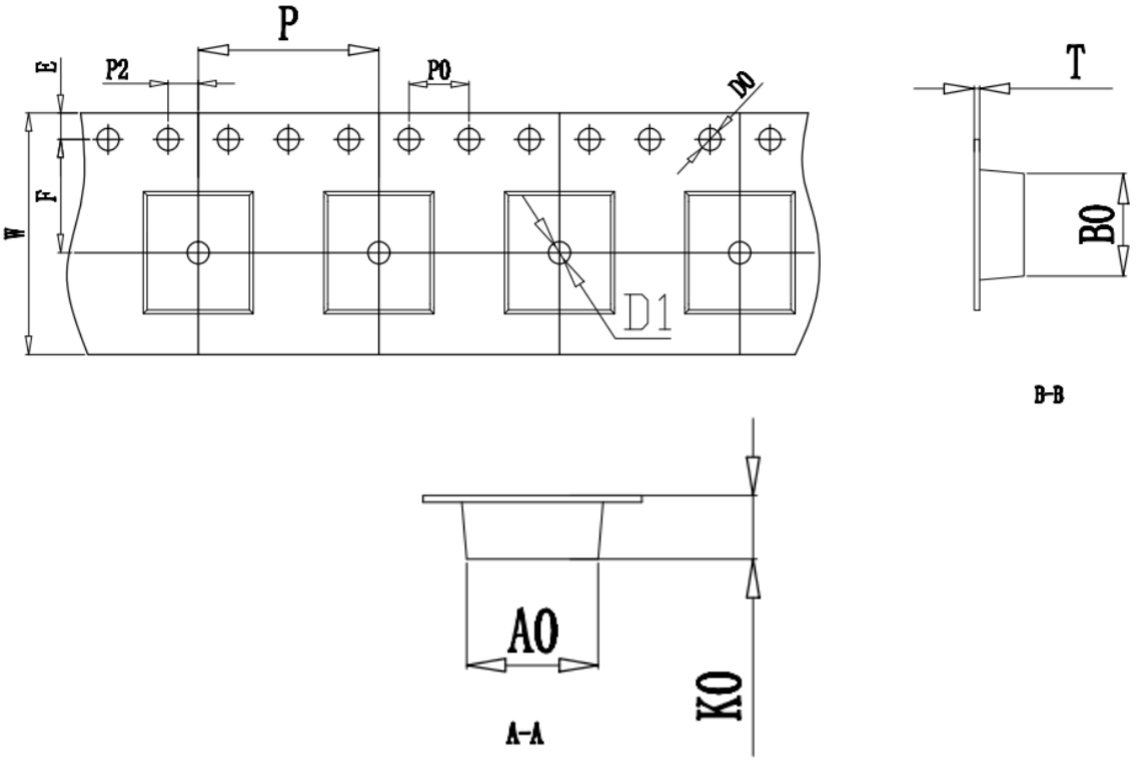
5：Irms: DC current that causes the temperature rise (△T =40° C) from 20° C ambient;

6：Operating temperature -45° C～+125° 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 Fing.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℃ 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℃ 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%  Fig. 1	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%  Fig. 2	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

◆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