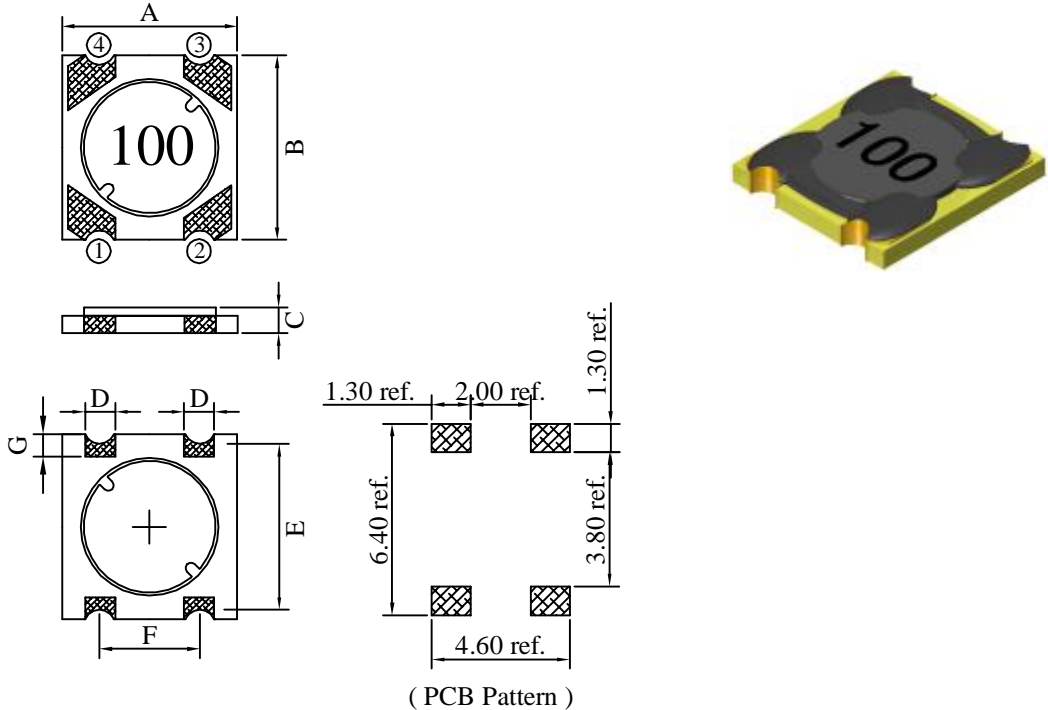


# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	SB5009□□□□L□-□□□		
		REV.	20130207-A	PAGE	1

**I . Configuration and dimensions :**



Unit : m/m

A	B	C	D	E	F	G
5.60±0.3	6.00±0.3	0.95±0.1	1.00 typ.	5.20 typ.	3.20 typ.	0.80 ref.

**II . Schematic diagram :**



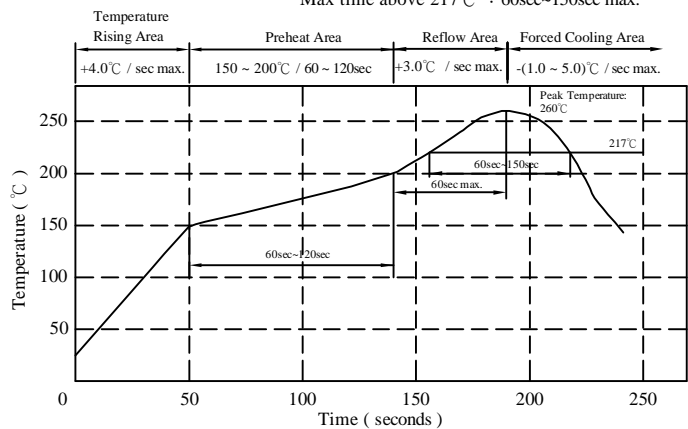
**III . Description :**

- a . Ferrite drum core construction.
- b . Enamelled copper wire : F class
- c . Product weight : 1.70g ( ref. )
- d . Moisture sensitivity Level 1
- e . Products comply with RoHS' requirements
- f . Halogen free available.

**IV . General specification :**

- a . Storage temp. : -40°C ----+125°C
- b . Operating temp. : -40°C ----+125°C  
(Temp. rise included)
- c . Resistance to solder heat : 260°C .10 secs.

Peak Temp : 260°C max.  
Max. Peak Temp -5°C : 30sec max.  
Max time above 217°C : 60sec~150sec max.



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# SPECIFICATION FOR APPROVAL

REF. :

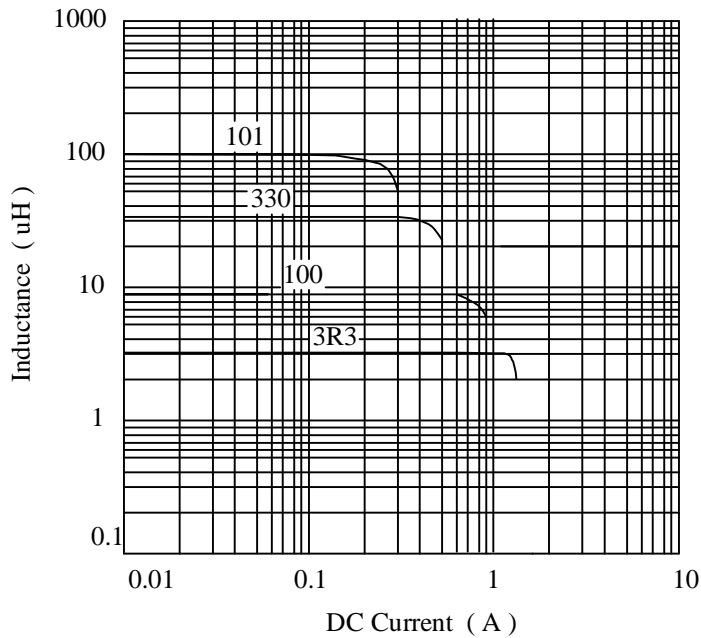
PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	SB5009□□□□L□-□□□		
		REV.	20130207-A	PAGE	2

V . Electrical characteristics :

DWG No.	Inductance ( $\mu$ H )	Test Freq. ( Hz )	RDC ( $\Omega$ ) max.	I <sub>rms</sub> ( A ) typ.	I <sub>sat</sub> ( A ) typ.
SB50091R0ML□-□□□	1.0±20%	100K	0.060	1.50	1.80
SB50092R2ML□-□□□	2.2±20%	100K	0.098	1.20	1.35
SB50093R3ML□-□□□	3.3±20%	100K	0.130	1.05	1.10
SB50094R7ML□-□□□	4.7±20%	100K	0.165	0.90	1.00
SB50096R8ML□-□□□	6.8±20%	100K	0.250	0.70	0.82
SB5009100ML□-□□□	10.0±20%	100K	0.320	0.60	0.68
SB5009150ML□-□□□	15.0±20%	100K	0.500	0.47	0.55
SB5009220ML□-□□□	22.0±20%	100K	0.750	0.38	0.43
SB5009330ML□-□□□	33.0±20%	100K	1.150	0.30	0.35
SB5009470ML□-□□□	47.0±20%	100K	1.650	0.23	0.28
SB5009680ML□-□□□	68.0±20%	100K	2.560	0.18	0.22
SB5009101ML□-□□□	100.0±20%	100K	3.200	0.15	0.18

- |                                       |   |
|---------------------------------------|---|
| 1). □: Packaging information : □ Code | 4). Inductance test freq. : 100KHz / 1V               |
| 2). "- □□□" : Reference code          | 5). I <sub>rms</sub> base on temp. rise 40°C typ.     |
| 3). Electrical specifications at 25°C | 6). I <sub>sat</sub> base on $\Delta L/L0A=10\%$ typ. |

@ Inductance VS. DC Superposition Characteristics



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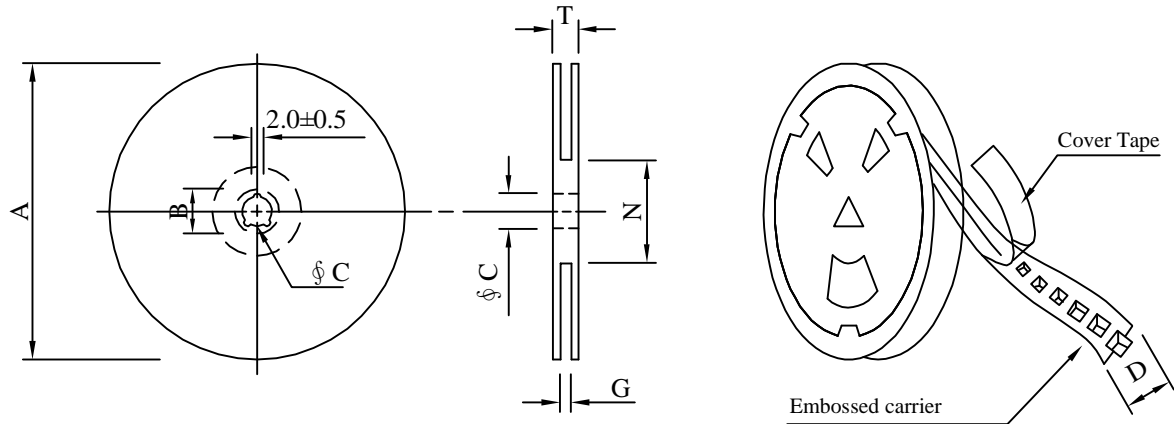
# SPECIFICATION FOR APPROVAL

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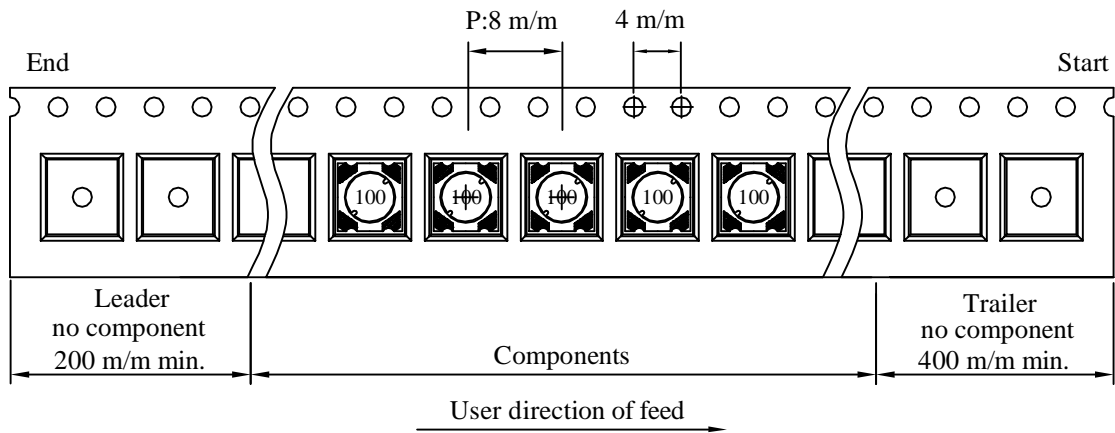
PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	SB5009□□□□L□-□□□		
		REV.	20130207-A	PAGE	3

## VI . Packaging information :

### (1) Configuration



※Carrier Tape width : D



### (2) Dimensions

Unit:m/m

Style	A	B	C	D	G	N	T
07-12	178	21±0.8	13	12	14 <sup>+0</sup>	50 <sup>-0</sup>	16.5

### (3) Q'TY & G.W. Per package

Code	Inner : Reel			Outer : Carton		
	Q'TY (pcs)	G.W. (gw)	Style	Q'TY (pcs)	G.W. (Kg)	Size (cm)
B	1,200	99	07-12	48,000	3.95	42 x 41 x 24

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# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	SB5009□□□□L□-□□□		
		REV.	20130207-A	PAGE	4

## VII . Reliability test :

Item	Reference documents	Test Condition	Test Specification
1.High Temperature Exposure	MIL-STD-202 Method 108	1.Temperature: 125℃ 2.Time:96 hours.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
2.Temperature Cycling	JESD22 Method JA-104	1.Temperature: -40℃ ~ 125℃ 2.Number of cycle:96 cycle 3.Dwell time:30 minutes	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
3.Biased Humidity Test	MIL-STD-202 Method 103	1.Temperature: 85±5℃ 2.Time:96 Hours 3.Humidity: 85±5% RH.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
4.Operational Life	MIL-PRF-27	1.Temperature: 125℃ 2.Time:96 hours. 3.Apply rated current.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
5.Exeternal Visual	MIL-STD-883 Method 2009	Inspect product constructions, marking and workmanship.	1.No pollution on the surface of products. 2.Clear marking. 3.No crack.
6.Physical Dimensions	JESD22 Method JB-100	Verify physical dimensions to the applicable product detail specification.	Per product specification standard
7.Resistance to solvents	MIL-STD-202 Method 215	Immerse into solvent for 3±0.5 minutes & brush 10 times for their cycles.	1.No body change in apperance. 2.No marking blurred. 3.Inductance shall not change more than ±10%.
8.Vibration Test	MIL-STD-202 Method 204	1.Frequency and Amplitued : 10-2000-10 Hz, 1.5 mm. 2.Direction:X, Y, Z 3.Test duration:2 hours for each direction, 6 hours in total.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
9.Resistance To Soldering Heat Test	MIL-STD-202 Method 210	1.Highest temperature : 260±5℃ 2.Time ( temp. ≥ 217℃ ) : 60~150 Second. 3.IR reflow times : 3 times.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
10.Rated current	MIL-STD-202 Method 330	Apply rated current for 5 second.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
11.Temperature rise	MIL-PRF-27	Apply rated current for 10 minutes.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
12.Over load	MIL-PRF-27	Apply twice as rated current for 5 minutes. (It's not application to some special design)	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
13.Solderability Test	J-STD-002	1.Baking in pre-testing : 155±5℃ / 16Hours±30 min. 2.Peak temperature : 240±5℃ 3.Time ( temp. ≥ 217℃ ) : 60~150 second. 4.IR reflow times : 1 times.	The terminal shall be at least 95% covered with fresh solder.
14.Electrical Characteriazation	User Spec.	1.Operating temperature : -40℃~125℃ 2.Room temperature : 25℃.	1.No mechanical and electrical damage. 2.Inductance shall not change more than ±10%.
15.Withstanding Voltage Test	MIL-STD-202 Method 201	1.DV:500V 2.Time:1minutes	1.During the test no breakdown. 2.The characteristic is normal after test.
16.Drop	JESD22-B111	Packaged & Drop down from 1m.In 1 angle 1ridges & 2 surfaces orientation.	1.No case deformation or change in appearance. 2.Inductance shall not change more than ±10%.
17.Terminal Strength Test	JIS-C-6429	1.Apply push force to samples mounted on PCB. 2.Force of 1.8 kg for 60±1 seconds.	After test, inductors shall be no mechanical damage.

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