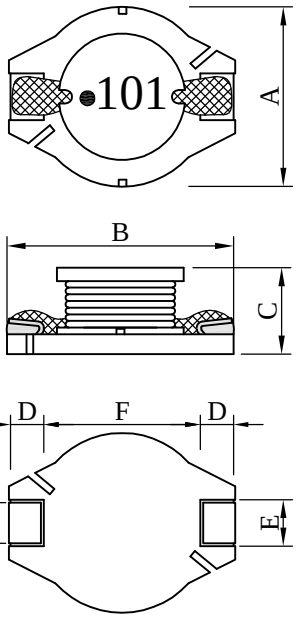
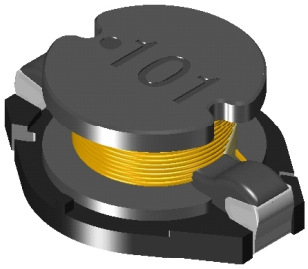
SPECIFICATION FOR APPROVAL

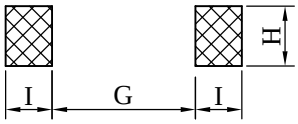
REF. :

PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	SB1005□□□□L□-□□□		
		REV.	20160728-K	PAGE	1

Ⅰ．Configuration and dimensions：







(PCB Pattern)

Unit：m/m

A	B	C	D	E	E1	F	G	H	I
10.00 ±0.3	12.70 ±0.3	5.00 ±0.3	2.40 ±0.2	2.20 ±0.2	1.95 ±0.1	7.60 ±0.3	7.30 ref.	2.80 ref.	3.00 ref.

Ⅱ．Description：

a．Ferrite drum core construction.

b．Enamelled copper wire：F class

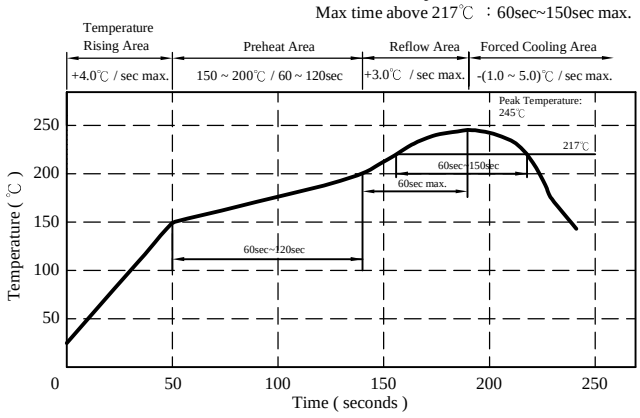
c．Product weight：1.30 g（ref.）

d．Moisture sensitivity Level 1

e．Products comply with RoHS' requirements

f．Halogen free available.

Peak Temp：245℃ max.
Max. Peak Temp - 5℃：30sec max.
Max time above 217℃ ：60sec~150sec max.



Ⅲ．General specification：

a．Storage temp.：-40℃ ----+125℃

b．Operating temp.：-40℃----+125℃

（Temp. rise included）

c．Resistance to solder heat：245℃.10 secs.

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ABC ELECTRONICS GROUP

SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	SB1005□□□□L□-□□□		
		REV.	20160728-K	PAGE	2

Ⅳ . Electrical characteristics：

DWG No.	Inductance (uH) 0.1 V / 100 kHz	RDC (Ω) max.	SRF (MHz) typ.	Irms (A) typ.	Isat (A) max.
SB10051R0ML□ -□□□	1.0±20%	0.007	130.0	7.50	9.00
SB10051R5ML□ -□□□	1.5±20%	0.009	90.0	6.50	8.00
SB10052R5ML□ -□□□	2.5±20%	0.012	65.0	5.50	7.00
SB10053R3ML□ -□□□	3.3±20%	0.015	50.0	5.00	6.40
SB10054R7ML□ -□□□	4.7±20%	0.019	45.0	4.50	5.40
SB10056R8ML□ -□□□	6.8±20%	0.034	35.0	3.40	4.50
SB1005100ML□ -□□□	10.0±20%	0.045	25.0	2.90	3.70
SB1005150ML□ -□□□	15.0±20%	0.060	23.0	2.50	3.00
SB1005220ML□ -□□□	22.0±20%	0.095	18.0	2.00	2.50
SB1005330KL□ -□□□	33.0±10%	0.120	15.0	1.80	2.00
SB1005470KL□ -□□□	47.0±10%	0.190	12.0	1.40	1.60
SB1005680KL□ -□□□	68.0±10%	0.240	10.0	1.20	1.40
SB1005101KL□ -□□□	100.0±10%	0.330	8.0	1.00	1.20
SB1005151KL□ -□□□	150.0±10%	0.590	6.0	0.80	1.00
SB1005221KL□ -□□□	220.0±10%	0.780	5.0	0.70	0.80
SB1005331KL□ -□□□	330.0±10%	1.150	4.0	0.55	0.60
SB1005471KL□ -□□□	470.0±10%	1.700	3.5	0.45	0.50
SB1005681KL□ -□□□	680.0±10%	2.600	3.0	0.35	0.40
SB1005102KL□ -□□□	1000.0±10%	3.900	2.0	0.30	0.30
SB1005152KL□ -□□□	1500.0±10%	6.300	1.9	0.25	0.25
SB1005222KL□ -□□□	2200.0±10%	8.200	1.6	0.20	0.20
SB1005332KL□ -□□□	3300.0±10%	14.000	1.2	0.16	0.17
SB1005472KL□ -□□□	4700.0±10%	17.000	1.1	0.15	0.15
SB1005682KL□ -□□□	6800.0±10%	30.000	0.9	0.11	0.12
SB1005103KL□ -□□□	10000.0±10%	39.000	0.7	0.10	0.10

1). □：Packaging information：□ Code

2). "-□□□"：Reference code

3). Electrical specifications at 25℃

4). Isat base on △ L/L0A＝10％ max.

5). Irms base on Temp. rise 40℃ typ.

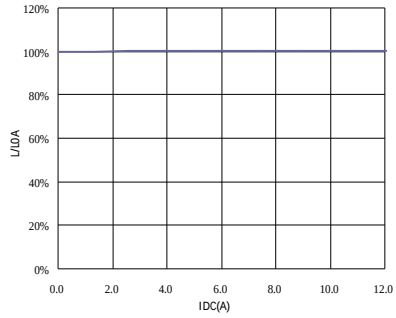
SPECIFICATION FOR APPROVAL

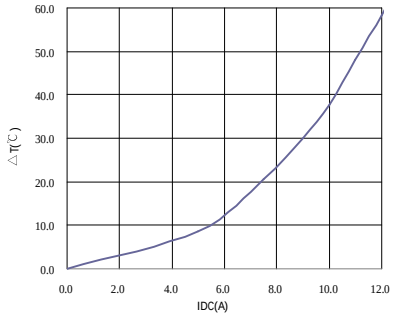
REF. :

PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	SB1005□□□□L□-□□□		
		REV.	20160728-K	PAGE	3

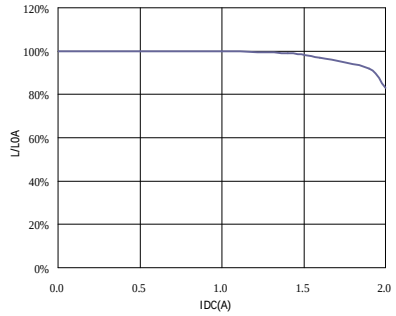
V . Curve：

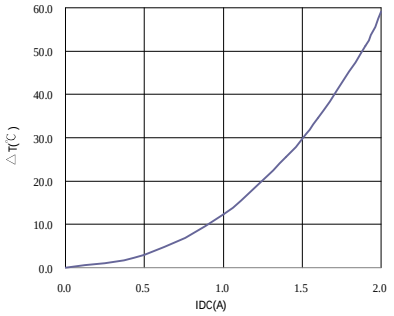
SB10051R0ML□



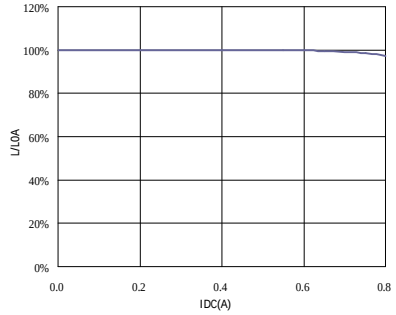


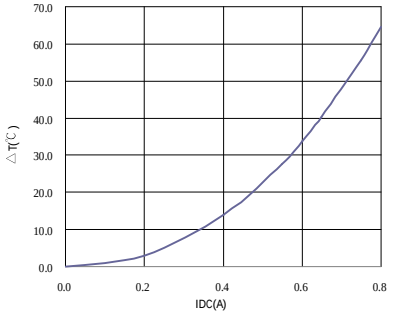
SB1005470KL□



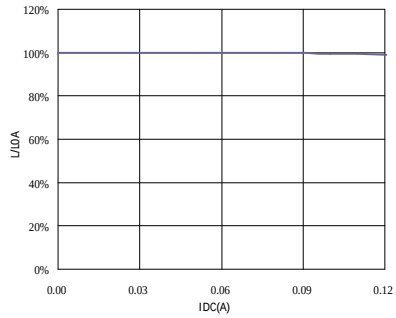


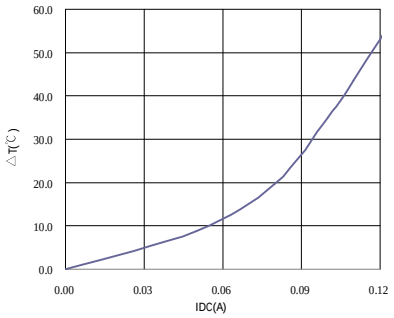
SB1005331KL□





SB1005103KL□





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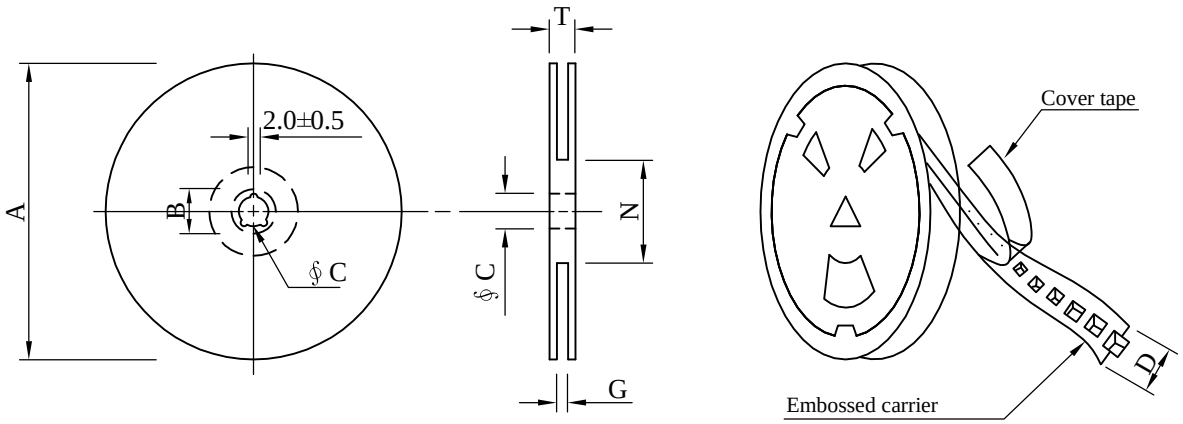
SPECIFICATION FOR APPROVAL

REF. :

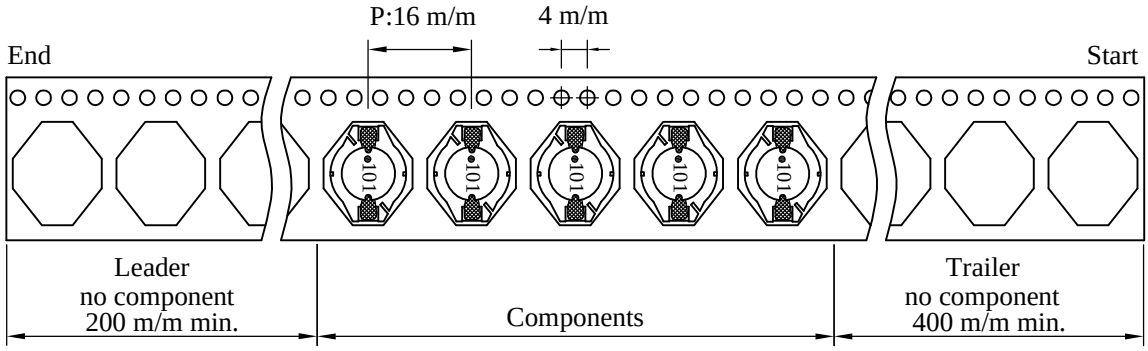
PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	SB1005□□□□L□-□□□		
		REV.	20160728-K	PAGE	4

Ⅵ．Packaging information：

(1). Configuration :



※Carrier tape width：D



(2). Dimensions : Unit:m/m

Style	A	B	C	D	G	N	T
13 - 24	330	21±0.8	13±0.5	24	26^{+0}	60^{-0}	30.4

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

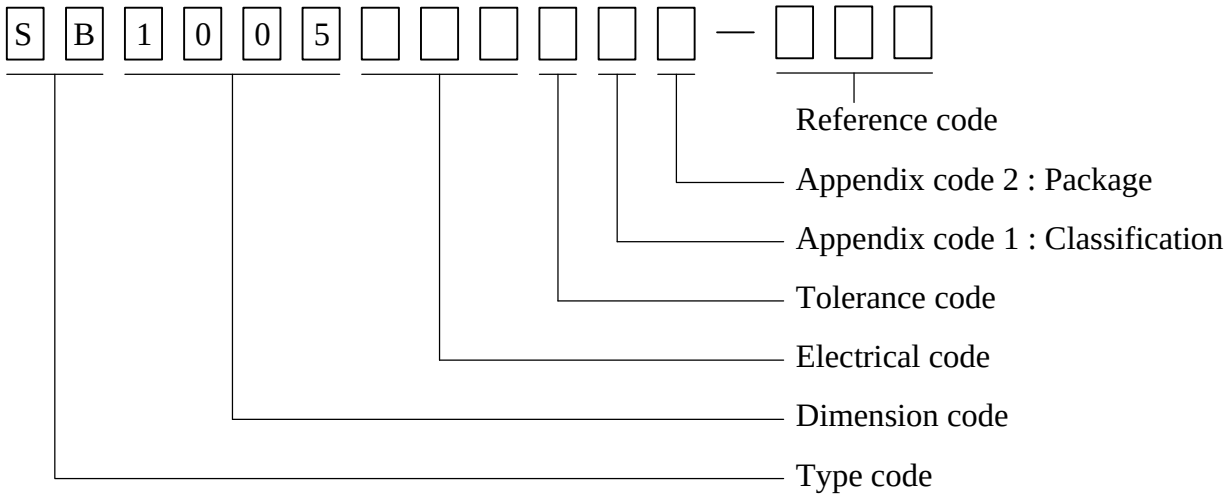
Code	Inner : Reel			Outer : Carton		
	Q'TY (pcs)	G.W. (gw)	Style	Q'TY (pcs)	G.W. (kg)	Size (cm)
B	600	1210	13 - 24	2,400	6.1	38 x 37 x 22
C	500	1080	13 - 24	2,000	5.6	38 x 37 x 22
D	600	1210	13 - 24	2,400	6.1	38 x 37 x 22

SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	SB1005□□□□L□-□□□		
		REV.	20160728-K	PAGE	5

Ⅶ．Drawing number expression：



Appendix code 1：Product Classification

Appendix code 2：Package Information

Code	Inner package	Cover tape	Carrier tape	Bag	Package Q'TY	Remark
B	T /R (Reel package)	UCT	Antistatic	Antistatic	600 pcs	
C	T /R (Reel package)	UCT	Antistatic	Antistatic	500 pcs	
D	T /R (Reel package)	UCT	Antistatic	MBB	600 pcs	

SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	SB1005□□□□L□-□□□		
		REV.	20160728-K	PAGE	6

Ⅷ . Reliability test：

Item	Reference documents	Test Condition	Test Specification
1.High Temperature Exposure	MIL-STD-202 Method 108	1.Temperature: 125±2℃ 2.Time:96±2 hours.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
2.Temperature Cycling	JESD22-A 104	1.Temperature: -40℃ ~ +125℃ 2.Number of cycle:100 cycles. 3.Dwell time:30 minutes	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
3.Biased Humidity Test	MIL-STD-202 Method 103	1.Temperature：85±2 ℃ 2.Humidity: 85% RH. 3.Time:96±2 Hours	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
4.Operational Life	JESD22-A 108	1.Temperature: 125℃ (Temp. rise included) 2.Time:96±2 hours. 3.Rated current	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
5.External Visual	JESD22-B 101 & 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-B 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 3 cycles.	1.No body change in apperarance. 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 or electrical damage. 2.Inductance shall not change more than ±10%.
9.Resistance To Soldering Heat Test	MIL-STD-202 Method 210 & J-STD020D.1	1.Highest temperature：245±5℃. 2.Time（temp.≧ 217℃）：60~150 Seconds. 3.IR reflow times：3 times.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
10.Saturation Current	JIS C 6436 & User SPEC.	1.Applied rated current for 5 seconds. 2.Saturation current	Inductance shall not drop more than 10% max.
11.Over load	JIS C 6436 & User SPEC.	1.Applied one and half rated current for a period of 5 minutes. 2.Rated current	No electrical or mechanical damage
12.Temperature Rise Current	JIS C 6436 & User SPEC.	1.Applied rated current for 10 minutes. 2.Temperature measure by digital surface thermometer. 3.Irms current	Surface temperature rise is less than 40℃ typ.
13.Solderability Test	J-STD-002 & JESD22-B 102	1.Baking in pre-testing： 150±5℃ / 16Hours±30 min. 2.Peak temperature：240±5℃ 3.Time（temp.≧217℃）：60~150 seconds. 4.IR reflow times：1 time.	More than 95% soldering coverage min on terminations.
14.Electrical Characteriazation	MIL-STD-202 Method 304 & User SPEC.	1.Operating temperature：-40℃~125℃ 2.Room temperature：25℃.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±10%.
15.Drop	CNS-C6354 & GB/T 2423.8	1.Products shall be mounted on SPEC. pcb and dropped down from a heigh of 1m 2.Drop total time：6 time (Every side ofsample drop 2 times)	1. Adhesion on PCB shall be enough. 2. Product appearance shall not break. 3. No electrical damage.
16.Terminal Strength Test	IEC 60068-2-21	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.