SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	SMD Power Inductor	ABC'S DWG NO.	SB1030□□□□L□-□□□		
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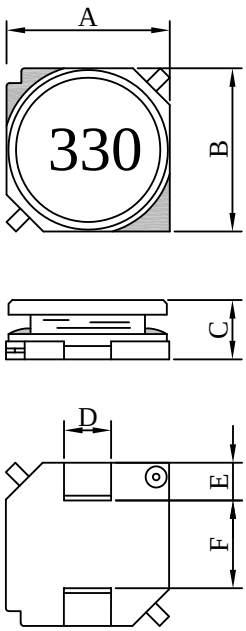
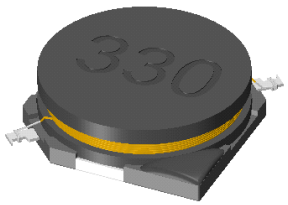
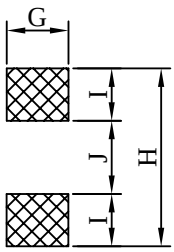
Ⅰ．Configuration and dimensions：







（PCB Pattern）

Unit：m/m

A	B	C	D	E	F	G	H	I	J
10.0 ±0.3	10.0 ±0.3	3.00 ±0.3	2.40 typ.	2.00 typ.	6.00 typ.	2.80 ref.	10.40 ref.	2.40 ref.	5.60 ref.

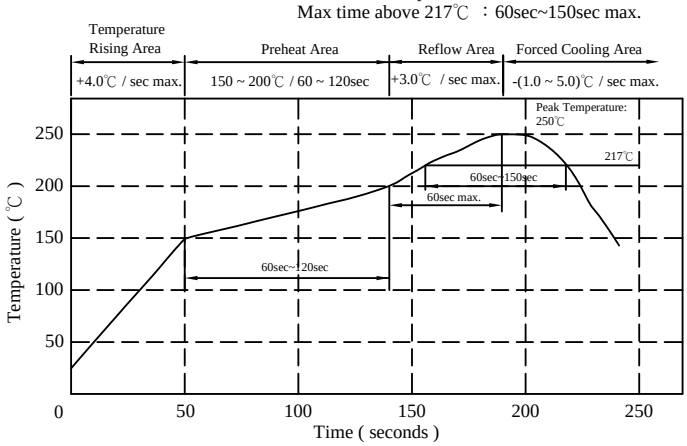
Ⅱ．Description：

a．Ferrite drum core construction.
b．Enamelled copper wire：F class
c．Product weight：0.97 g（ref.）
d．Moisture sensitivity Level 1
e．Products comply with RoHS' requirements
f．Halogen free available.

Ⅲ．General specification：

a．Storage temp.：-40℃ ~ +125℃
b．Operating temp.：-40℃ ~ +125℃
（Temp. rise included）
c．Resistance to solder heat：250℃. 10 secs.

Peak Temp：250℃ max.
Max. Peak Temp - 5℃：30sec max.
Max time above 217℃：60sec~150sec max.



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Ⅳ．Electrical characteristics：

DWG No.	L (uH)	Q ref.	Test Freq. L (Hz)	Test Freq. Q (MHz)	SRF (MHz) typ.	RDC (Ω) max.	Irms (A)	Isat (A)
SB10302R7ML□-□□□	2.7±20%	13	100K/0.1V	7.96	73.6	0.028	3.00	4.20
SB10304R7ML□-□□□	4.7±20%	13	100K/0.1V	7.96	49.5	0.040	2.60	3.50
SB10306R8ML□-□□□	6.8±20%	15	100K/0.1V	7.96	38.1	0.052	2.20	2.80
SB1030100ML□-□□□	10.0±20%	15	100K/0.1V	2.52	33.1	0.064	2.00	2.40
SB1030150ML□-□□□	15.0±20%	18	100K/0.1V	2.52	25.7	0.100	1.65	1.85
SB1030220ML□-□□□	22.0±20%	20	100K/0.1V	2.52	22.3	0.145	1.38	1.60
SB1030330ML□-□□□	33.0±20%	16	100K/0.1V	2.52	16.4	0.220	1.10	1.25
SB1030470ML□-□□□	47.0±20%	10	100K/0.1V	2.52	14.2	0.270	0.96	1.10
SB1030680ML□-□□□	68.0±20%	12	100K/0.1V	2.52	12.2	0.360	0.82	0.90
SB1030101KL□-□□□	100.0±10%	14	100K/0.1V	0.796	9.3	0.540	0.70	0.75
SB1030151KL□-□□□	150.0±10%	23	100K/0.1V	0.796	7.9	0.800	0.60	0.58
SB1030221KL□-□□□	220.0±10%	23	100K/0.1V	0.796	6.2	1.150	0.46	0.48
SB1030331KL□-□□□	330.0±10%	25	100K/0.1V	0.796	5.1	1.700	0.38	0.40
SB1030471KL□-□□□	470.0±10%	20	100K/0.1V	0.796	3.8	2.600	0.28	0.32
SB1030681KL□-□□□	680.0±10%	18	100K/0.1V	0.796	3.2	3.300	0.23	0.27
SB1030102KL□-□□□	1000.0±10%	42	100K/0.1V	0.252	2.5	5.500	0.20	0.23

1). □：Packaging information：□ Code

2). "-□□□"：Reference code

3). Electrical specifications at 25℃

4). Isat base on △L / L0A=10% typ.

5). Irms base on Temp. rise 30℃ max.

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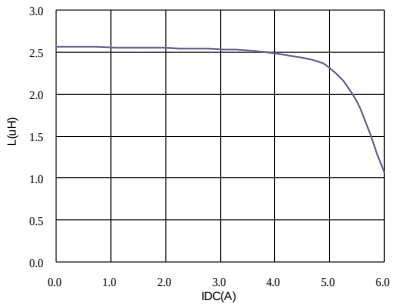
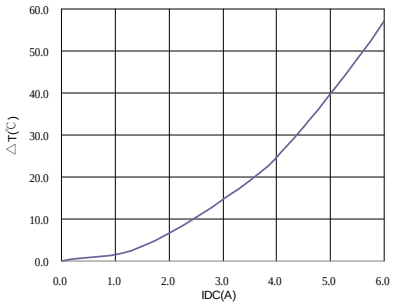
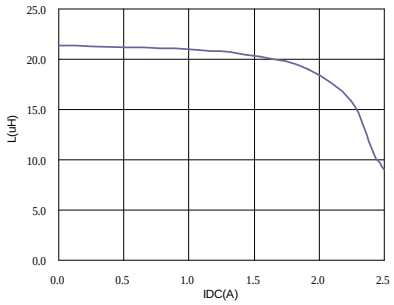
Ⅴ．Curve：

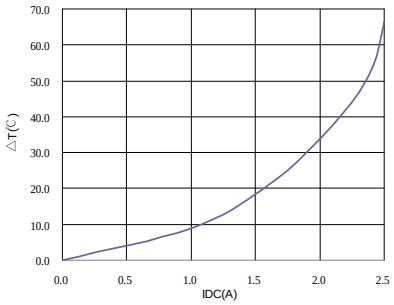
SB10302R7ML□



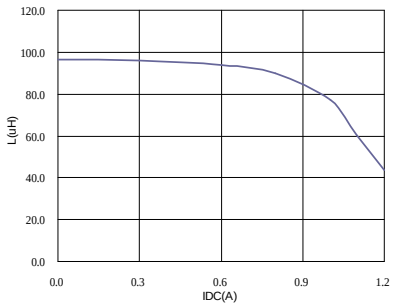


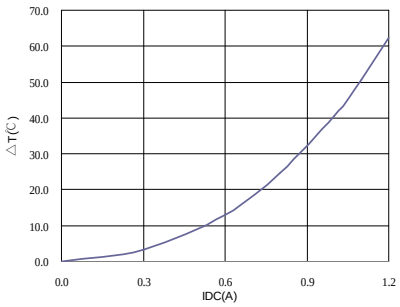
SB1030220ML□



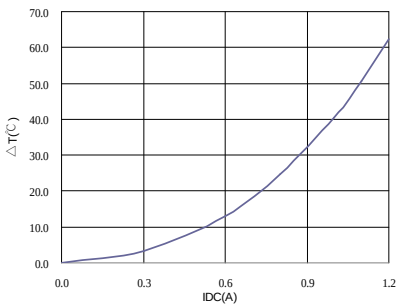


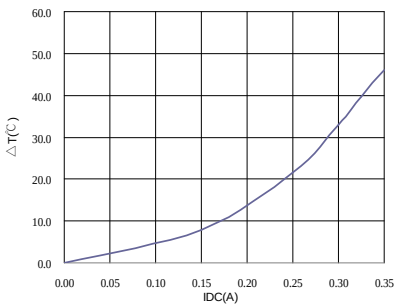
SB1030101KL□





SB1030102KL□





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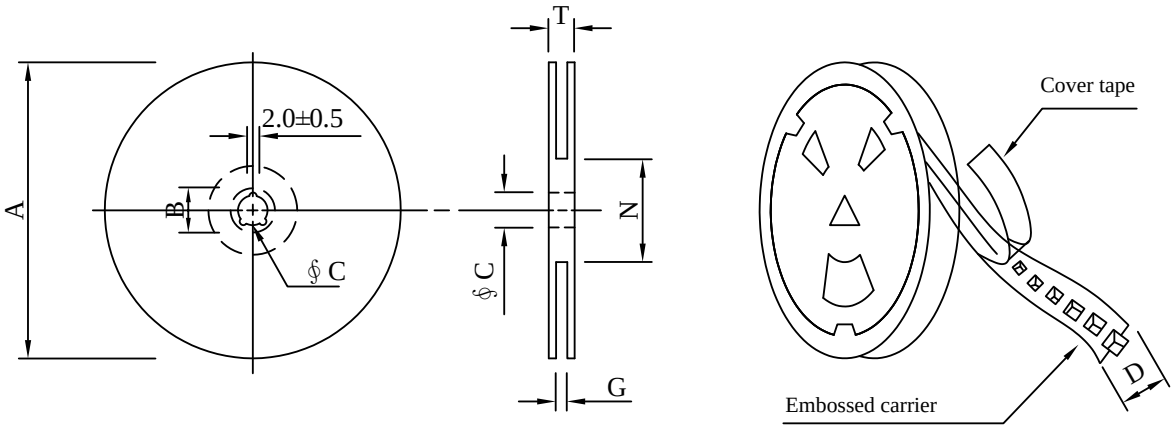
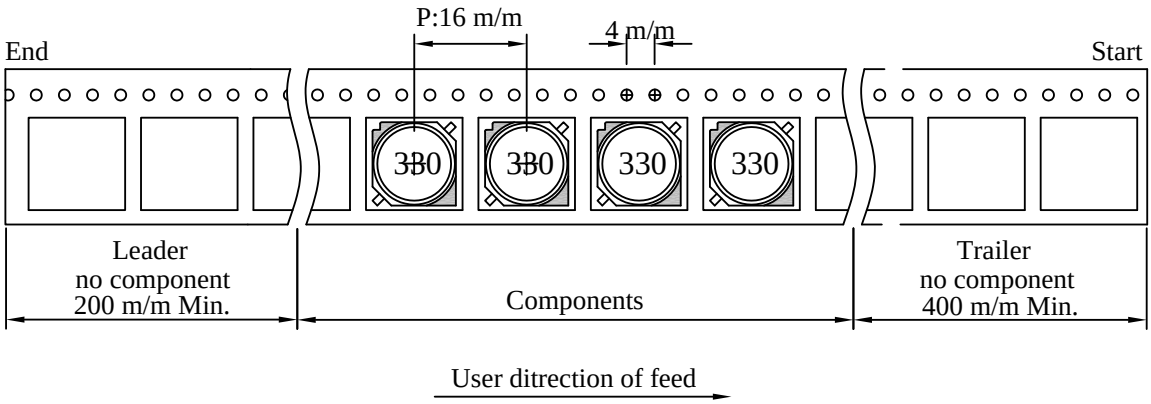
Ⅵ．Packaging information：

(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	1,000	3000	13 - 24	4,000	12.0	38 x 37 x 22

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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.External 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 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 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：250±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 double 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.DC: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.