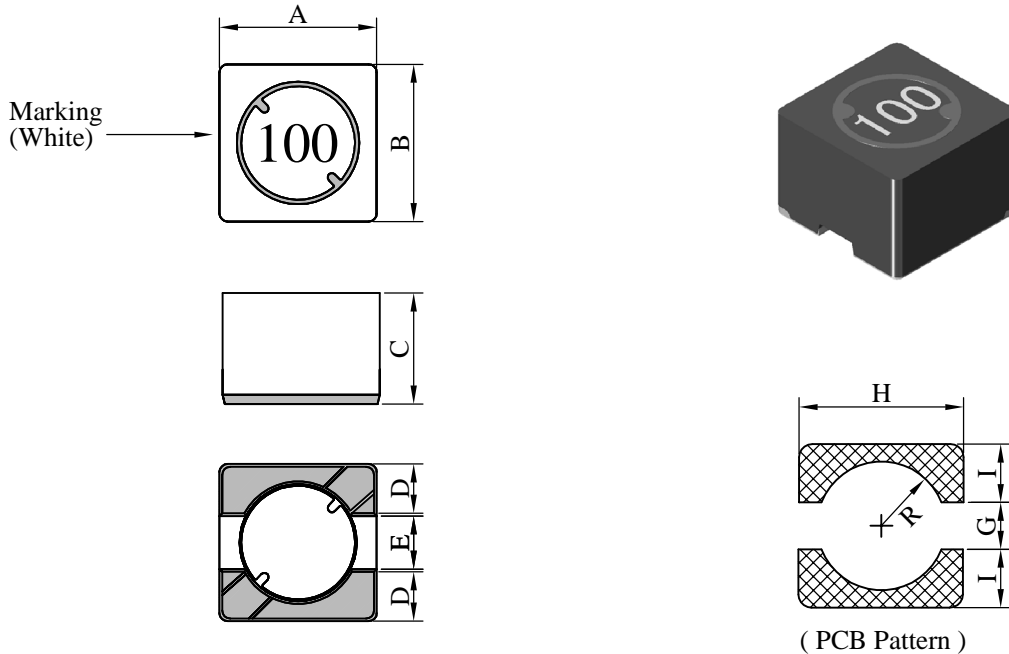


# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	SH3028□□□□L□-□□□		
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## I . Configuration and dimensions :



Unit : m/m

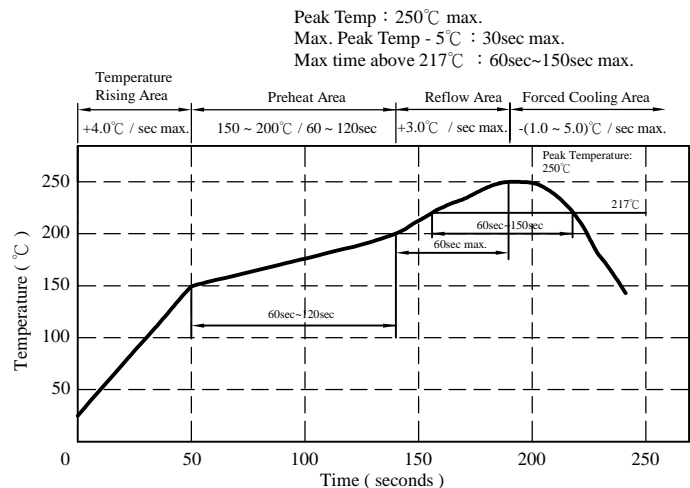
A	B	C	D	E	G	H	I	R
3.80 ±0.3	3.80 ±0.3	2.80 ±0.2	1.30 typ.	1.20 typ.	1.10 ref.	4.30 ref.	1.60 ref.	1.40 ref.

## II . Description :

- a . Ferrite drum core construction.
- b . Magnetically shielded.
- c . Enamelled copper wire : H class
- d . Product weight : 0.175g ( ref. )
- e . Moisture sensitivity Level 1
- f . Products comply with RoHS' requirements
- g . Halogen free available

## III . General specification :

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



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# SPECIFICATION FOR APPROVAL

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## IV . Electrical characteristics :

DWG No.	Inductance ( μH )	Q ref.	Test Freq. ( MHz )	SRF ( MHz ) typ.	RDC ( mΩ )		Isat ( mA ) typ.	Irms ( mA ) typ.
					typ.	max.		
SH30283R3YL□-□□□	3.3 ± 30 %	7	7.96	55	40	52	1700	1950
SH30284R7YL□-□□□	4.7 ± 30 %	6	7.96	50	43	56	1400	1900
SH30286R8YL□-□□□	6.8 ± 30 %	7	7.96	45	82	108	1150	1300
SH3028100YL□-□□□	10.0 ± 30 %	8	2.52	30	96	125	900	1100
SH3028150YL□-□□□	15.0 ± 30 %	7	2.52	20	160	200	700	920
SH3028220YL□-□□□	22.0 ± 30 %	8	2.52	14	255	320	600	820
SH3028330YL□-□□□	33.0 ± 30 %	7	2.52	12	350	440	500	660
SH3028470YL□-□□□	47.0 ± 30 %	8	2.52	10	430	535	450	600
SH3028680YL□-□□□	68.0 ± 30 %	6	2.52	8	620	780	360	520
SH3028101YL□-□□□	100.0 ± 30 %	10	0.796	7	925	1150	300	480

- 1). □: Packaging information : □ Code
- 2). "-□□□" : Reference code
- 3). Electrical specifications at 25°C
- 4). Inductance test freq. : 100kHz / 0.1V
- 5). Irms Base on temp rise 20°C typ.
- 6). Isat Base on  $\Delta L/L0A=35\%$  typ.

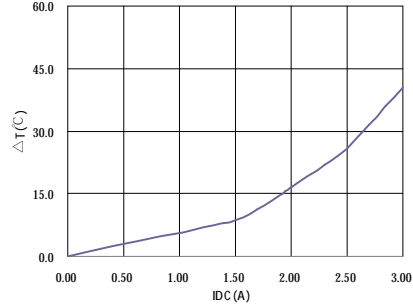
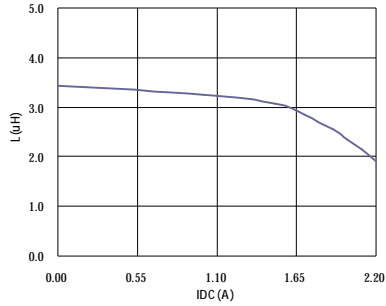
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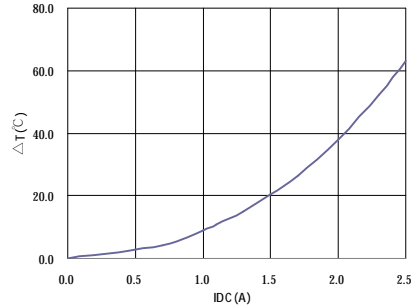
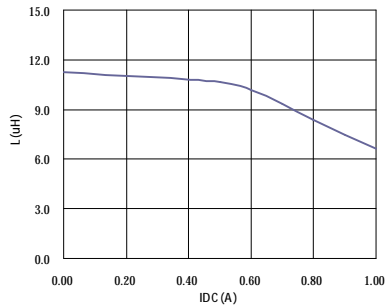
PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.		SH3028□□□□L□-□□□	
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V. Curve :

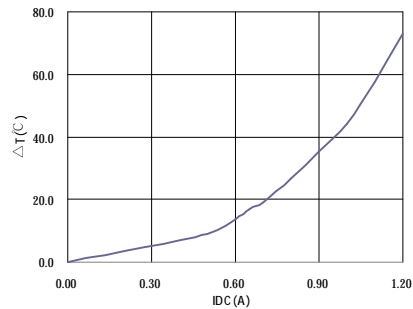
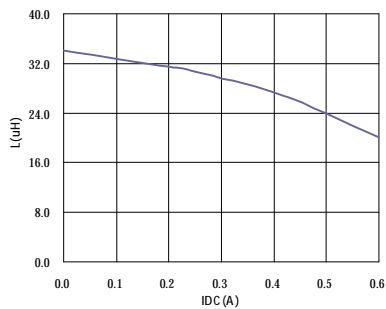
SH30283R3YL□



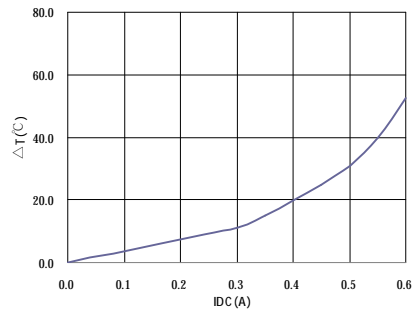
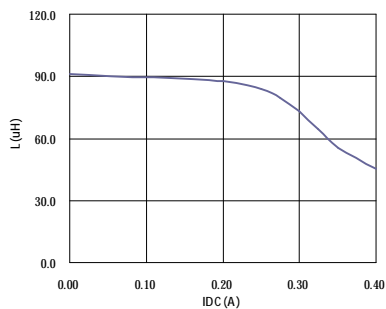
SH3028100YL□



SH3028330YL□



SH3028101YL□



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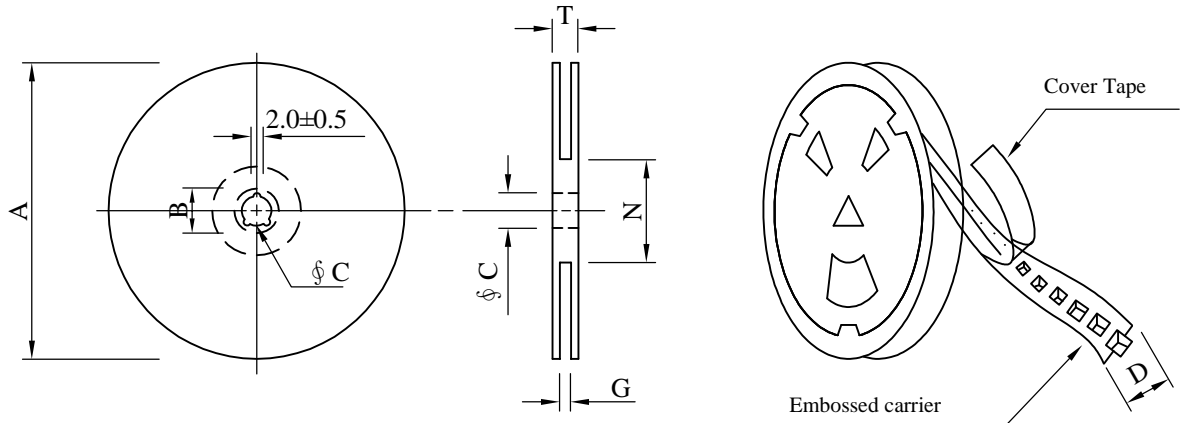
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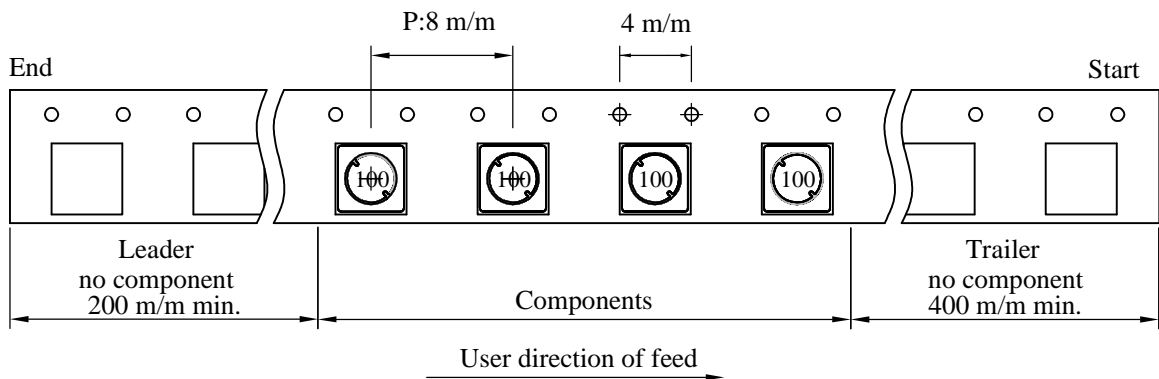
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## VI . Packaging information :

### ( 1 ) Configuration



※Carrier tape width : D



### ( 2 ) Dimensions

Unit:m/m

Style	A	B	C	D	G	N	T
07 - 12	178	21±0.8	13	12	14 <sup>+0</sup>	50 <sup>-0</sup>	16.5
13 - 12	330	21±0.8	13±0.5	12	14 <sup>+0</sup>	50 <sup>-0</sup>	18.4

### ( 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	500	200	07 - 12	20,000	9.2	42 x 41 x 24
C	500	200	07 - 12	20,000	9.2	42 x 41 x 24
D	2,500	807	13 - 12	20,000	7.7	38 x 37 x 22

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# SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	SH3028□□□□L□-□□□		
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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℃ 2.Time:96±2 hours.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
2.Temperature Cycling	JESD22-A 104	1.Temperature: -40℃ ~ +125℃ 2.Number of cycle:100 cycle 3.Dwell time:30 minutes	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
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 ±20%.
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 ±20%.
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 apperance. 2.No marking blurred. 3.Inductance shall not change more than ±20%.
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 ±20%.
9.Resistance To Soldering Heat Test	MIL-STD-202 Method 210 & J-STD020D.1	1.Highest temperature : 250±5℃. 2.Time ( temp. ≥ 217℃ ) : 60~150 Second. 3.IR reflow times : 3 times.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
10.Saturation Current	JIS C 6436 & User SPEC.	1.Applied rated current for 5 second. 2.Saturation current	Inductance shall not drop more than 35% typ.
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 20℃ 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 second. 4.IR reflow times : 1 times.	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 ±20%.
15.Drop	CNS-C6354 & GB/T 2423.8	1.Products shall be mounted on SPEC. PCB and dropped down from a height of 1m 2.Drop total time : 6 time (Every side of sample drop 2 time)	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.

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