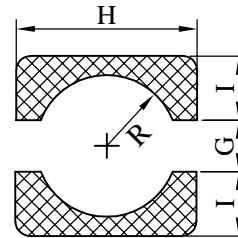
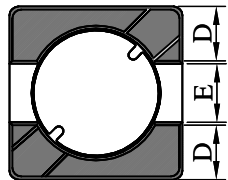
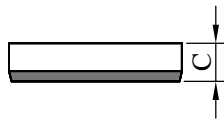
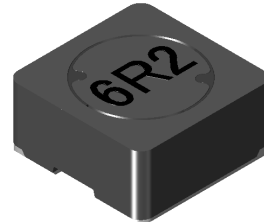
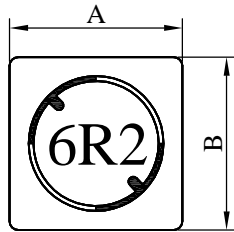


# SPECIFICATION FOR APPROVAL

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## I . Configuration and dimensions :



( PCB Pattern )

Unit : m/m

A	B	C	D	E	G	H	I	R
5.80 ±0.3	5.80 ±0.3	2.80 ±0.2	1.90 typ.	2.00 typ.	1.90 ref.	6.30 ref.	2.20 ref.	2.20 ref.

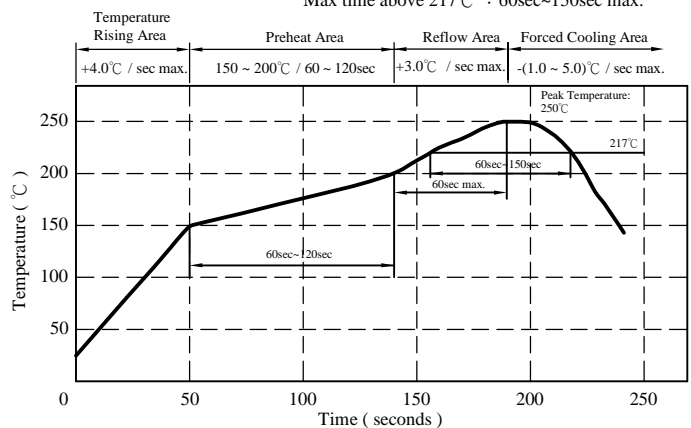
## II . Description :

- a . Ferrite drum core construction.
- b . Magnetically shielded.
- c . Enamelled copper wire : H class
- d . Product weight : 0.38g ( ref. )
- e . Moisture sensitivity Level 1
- f . Products comply with RoHS' requirements
- g . Halogen free

## 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.

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



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IV . Electrical characteristics :

DWG No.	Inductance ( $\mu$ H)	SRF (MHz) typ.	RDC ( $\Omega$ )		Irms (A) max.	Isat (A) typ.
			typ.	max.		
SH50282R6YL□-□□□	2.6 $\pm$ 30%	55.0	0.020	0.030	3.00	2.70
SH50283R0YL□-□□□	3.0 $\pm$ 30%	45.0	0.023	0.030	2.80	2.50
SH50284R2YL□-□□□	4.2 $\pm$ 30%	40.0	0.026	0.035	2.50	2.20
SH50285R3YL□-□□□	5.3 $\pm$ 30%	45.0	0.033	0.040	2.30	1.90
SH50286R2YL□-□□□	6.2 $\pm$ 30%	40.0	0.036	0.045	2.20	1.80
SH50288R2YL□-□□□	8.2 $\pm$ 30%	28.0	0.043	0.055	2.10	1.60
SH5028100YL□-□□□	10.0 $\pm$ 30%	25.0	0.056	0.070	1.50	1.40
SH5028120YL□-□□□	12.0 $\pm$ 30%	20.0	0.065	0.080	1.46	1.25
SH5028150YL□-□□□	15.0 $\pm$ 30%	20.0	0.074	0.100	1.38	1.15
SH5028180YL□-□□□	18.0 $\pm$ 30%	20.0	0.088	0.110	1.25	1.10
SH5028220YL□-□□□	22.0 $\pm$ 30%	18.0	0.098	0.120	1.15	1.00
SH5028270YL□-□□□	27.0 $\pm$ 30%	16.0	0.124	0.160	1.05	0.90
SH5028330YL□-□□□	33.0 $\pm$ 30%	15.0	0.164	0.190	0.90	0.78
SH5028390YL□-□□□	39.0 $\pm$ 30%	14.0	0.176	0.210	0.86	0.72
SH5028470YL□-□□□	47.0 $\pm$ 30%	13.0	0.199	0.250	0.82	0.65
SH5028560YL□-□□□	56.0 $\pm$ 30%	11.0	0.264	0.300	0.72	0.60
SH5028680YL□-□□□	68.0 $\pm$ 30%	10.0	0.287	0.350	0.62	0.56
SH5028820YL□-□□□	82.0 $\pm$ 30%	9.0	0.338	0.430	0.52	0.50
SH5028101YL□-□□□	100.0 $\pm$ 30%	8.5	0.378	0.480	0.45	0.45
SH5028151YL□-□□□	150.0 $\pm$ 30%	6.5	0.715	0.900	0.33	0.35
SH5028181YL□-□□□	180.0 $\pm$ 30%	6.3	0.784	1.000	0.32	0.31
SH5028221YL□-□□□	220.0 $\pm$ 30%	6.0	0.969	1.250	0.30	0.30
SH5028331YL□-□□□	330.0 $\pm$ 30%	4.5	1.660	2.000	0.20	0.20
SH5028681YL□-□□□	680.0 $\pm$ 30%	2.8	3.630	4.300	0.13	0.14

- 1). Electrical specifications at 25°C
- 2). Inductance test freq. : 100kHz / 0.1V
- 3). Irms Base on temp rise 30°C max.
- 4). Isat Base on  $\Delta$ L/L0A=35% typ.

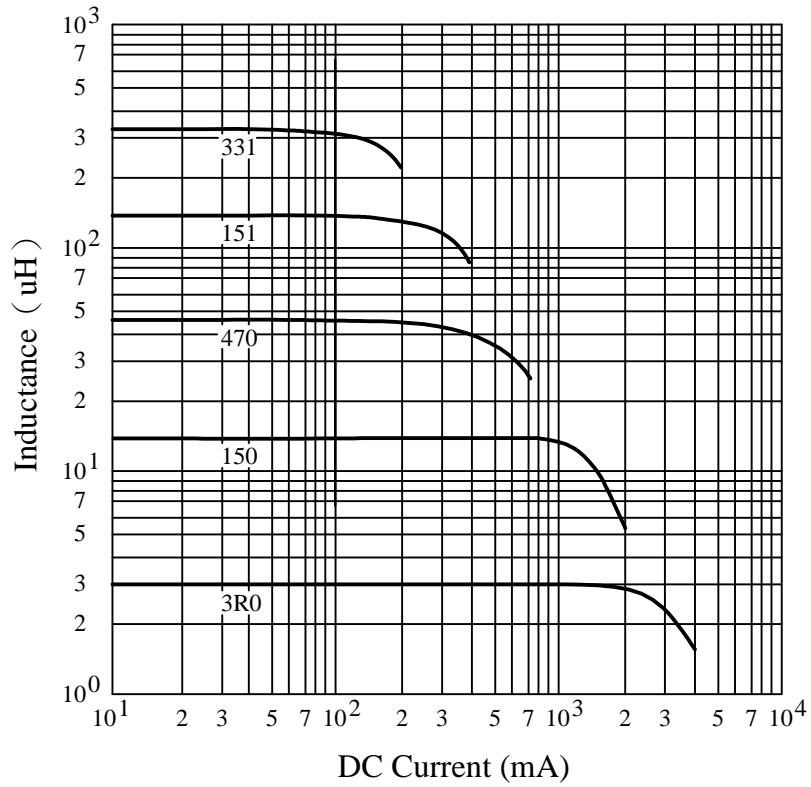
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V . Curve :



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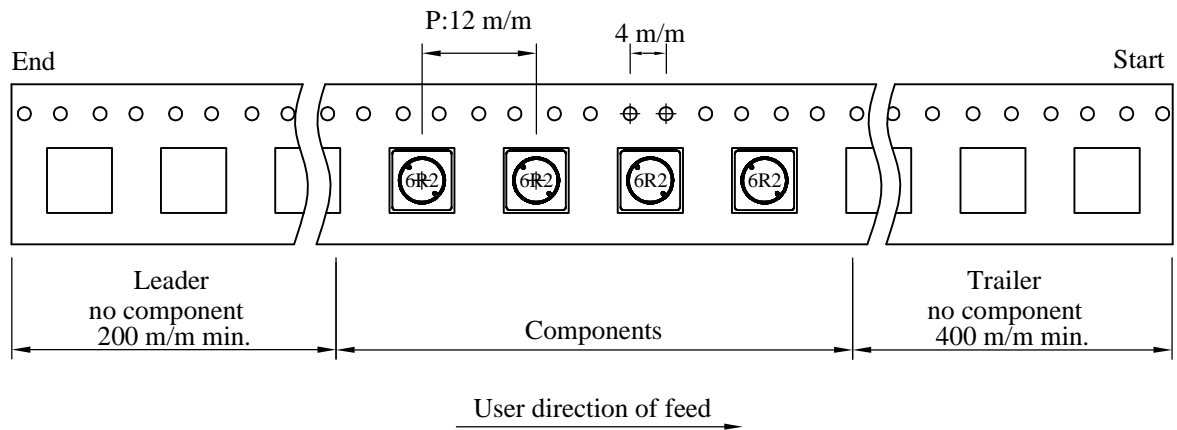
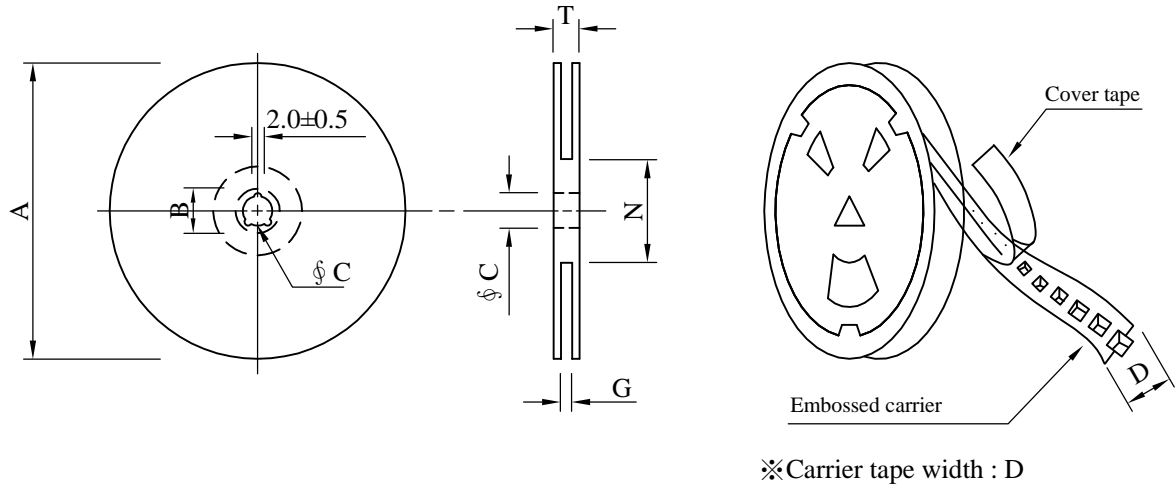
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## VI . Packaging information :

### ( 1 ) Configuration



### ( 2 ) Dimensions

Unit:m/m

Style	A	B	C	D	G	N	T
07 - 16	178	21±0.8	13	16	18 <sup>+0</sup>	50 <sup>-0</sup>	20.5
13 - 16	330	21±0.8	13±0.5	16	18 <sup>+0</sup>	50 <sup>-0</sup>	22.4

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

Code	Inner : Reel			Outer : Carton		
	Q'TY (pcs)	G.W. (g)	Style	Q'TY (pcs)	G.W. (Kg)	Size (cm)
B	400	270	07 - 16	12,000	9.6	42 x 41 x 24
C	1,500	1000	13 - 16	9,000	7.4	38 x 37 x 22

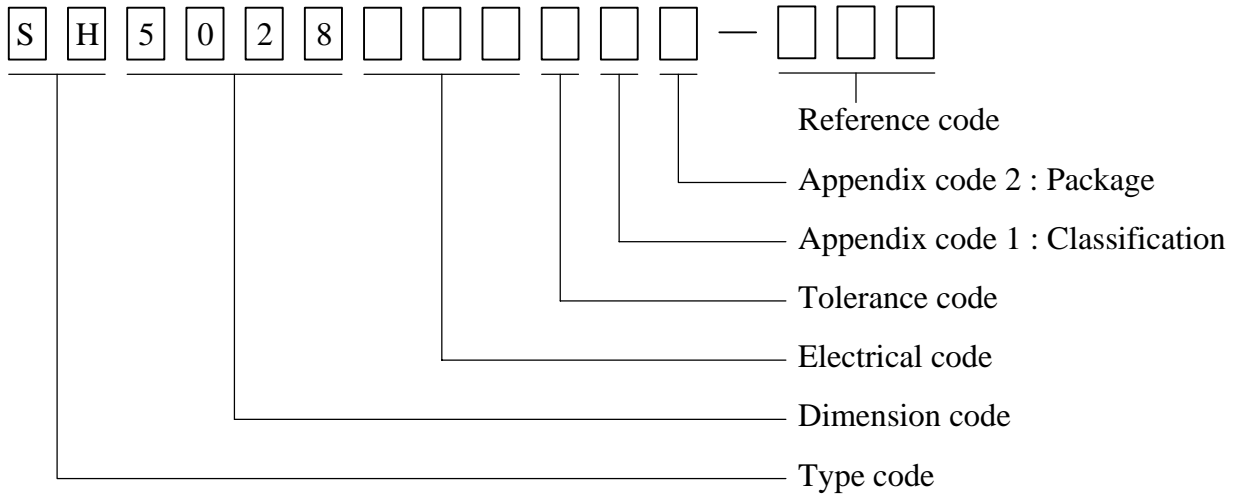
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VII . Drawing number expression :



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	400 pcs	
C	T /R (Reel package)	UCT	Antistatic	Antistatic	1500 pcs	

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## 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 ±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 appearance. 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 Seconds. 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 seconds. 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 30℃ max.
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 ±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 times (Every side of sample 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.

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**千如電子集團**  
ABC-ATEC ELECTRONICS GROUP

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IX . Change history :

DATE/REV.	DISCRIPTION	DRAWN	CHECKED	APPROVED
20091008-A	Modify the 2D drawing	Miz Hsieh	Nick Chen	Nick Chen
20100511-B	Modify the operature temperature : From -40°C ~+105°C change to -40°C ~+125°C (Temp. rise inculded)			
20130124-C	Modify the specification form			
20130611-D	Add Inductance 181Y			
20150824-E	1. Modify the Reliability test and the Package weight 2. Modify the 3D picture			
20161212-F	Add Change history and Drawing number expression			

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