

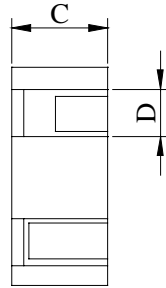
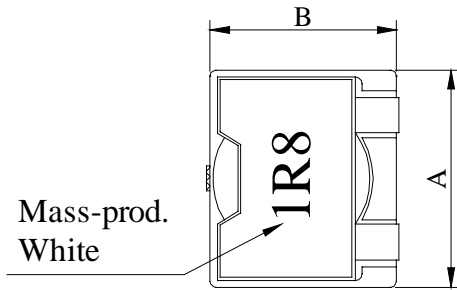
# SPECIFICATION FOR APPROVAL

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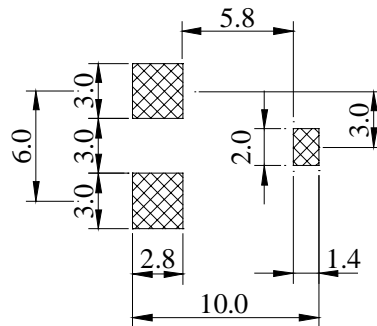
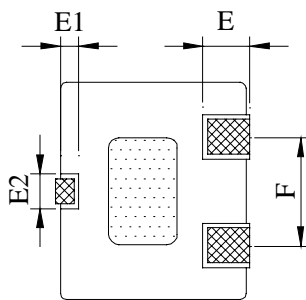
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PROD. NAME	SHIELDED SMD POWER INDUCTOR	ABC'S DWG No.	SP1045□□□□2□
		ABC'S ITEM No.	

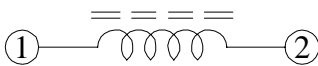
## I . MECHANICAL DIMENSIONS :



- A : 11.00±0.30 m/m
- B : 9.35±0.30 m/m
- C : 4.50±0.30 m/m
- D : 2.10 typ. m/m
- E : 2.00 typ. m/m
- E1: 1.00 typ. m/m
- E2: 1.50 typ. m/m
- F : 6.00 typ. m/m

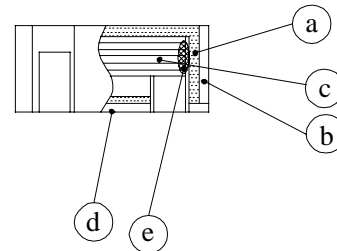


## II . SCHEMATIC DIAGRAM :



## III . MATERIALS LIST :

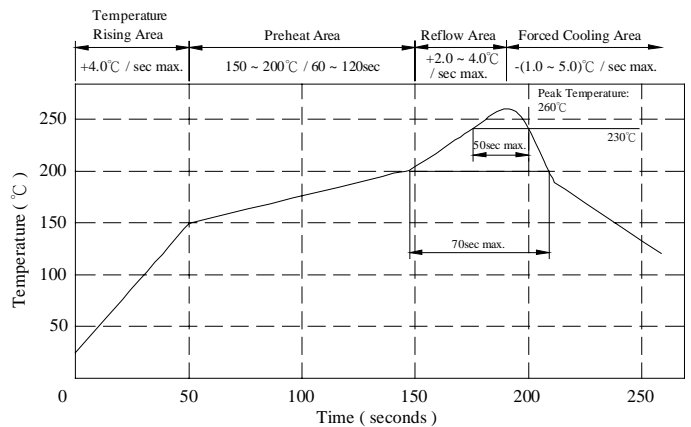
- a . Core : Ferrite ER core
- b . Base : UL 94V-0
- c . Wire : Ultra-fine rectangular Enamelled copper wire
- d . Clip : Cu / Ni / Sn
- e . Adhesive : Epoxy resin
- f . Remark : Lead content 200ppm max. include ferrite



Peak Temp : 260°C max.  
 Max time above 230°C : 50sec max.  
 Max time above 200°C : 70sec max.

## IV . GENERAL SPECIFICATION :

- a . Storage temp. : -55°C ~ +135°C
- b . Operating temp. : -55°C ~ +135°C (Temp. rise included)
- c . Resistance to solder heat : 260°C . 10 secs.



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		ABC'S ITEM No.	

**V . ELECTRICAL CHARACTERISTICS :**

DWG No.	Inductance L ( $\mu$ H )	Isat ( A )	Irms ( A )	RDC ( m $\Omega$ )	
				max.	typ.
SP1045R22Y2□	0.22 $\pm$ 30 %	40.0	23.0	1.7	1.3
SP1045R45M2□	0.45 $\pm$ 20 %	25.0	15.0	3.9	3.0
SP1045R80M2□	0.80 $\pm$ 20 %	20.0	13.0	4.4	3.4
SP10451R3M2□	1.30 $\pm$ 20 %	15.0	9.5	8.7	6.7
SP10451R8M2□	1.80 $\pm$ 20 %	13.0	8.0	10.4	8.0

- 1). □ : Packaging information ...  Bulk    Taping Reel
- 2). Measured frequency of inductance is 100 KHz / 1V
- 3). Isat base on inductance drop 25% typ. of L value at 20°C
- 4). Irms base on temp. rise 40°C max.

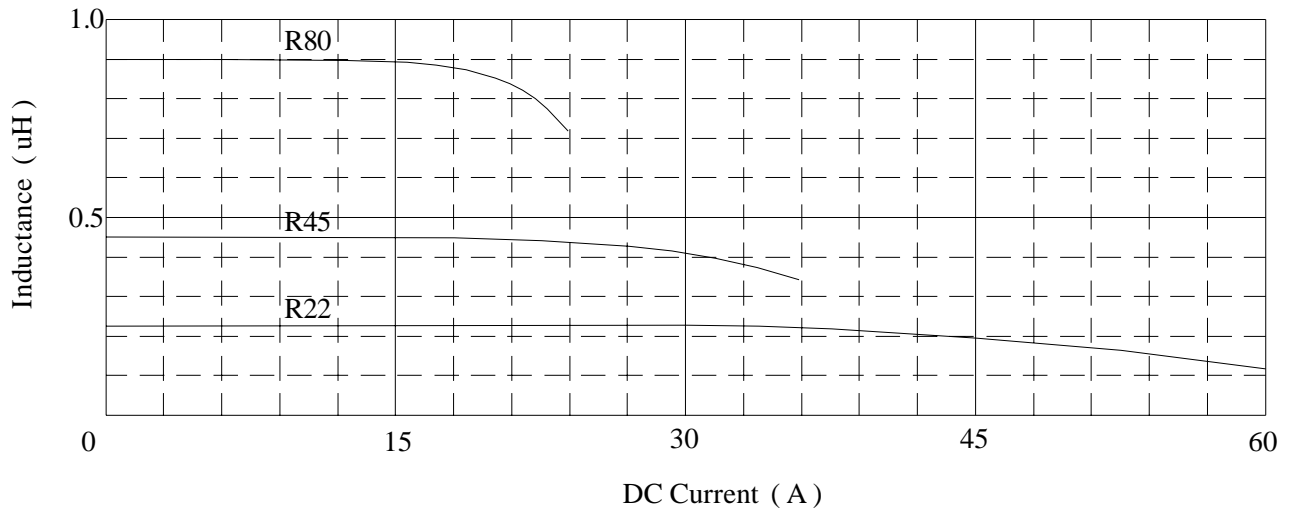
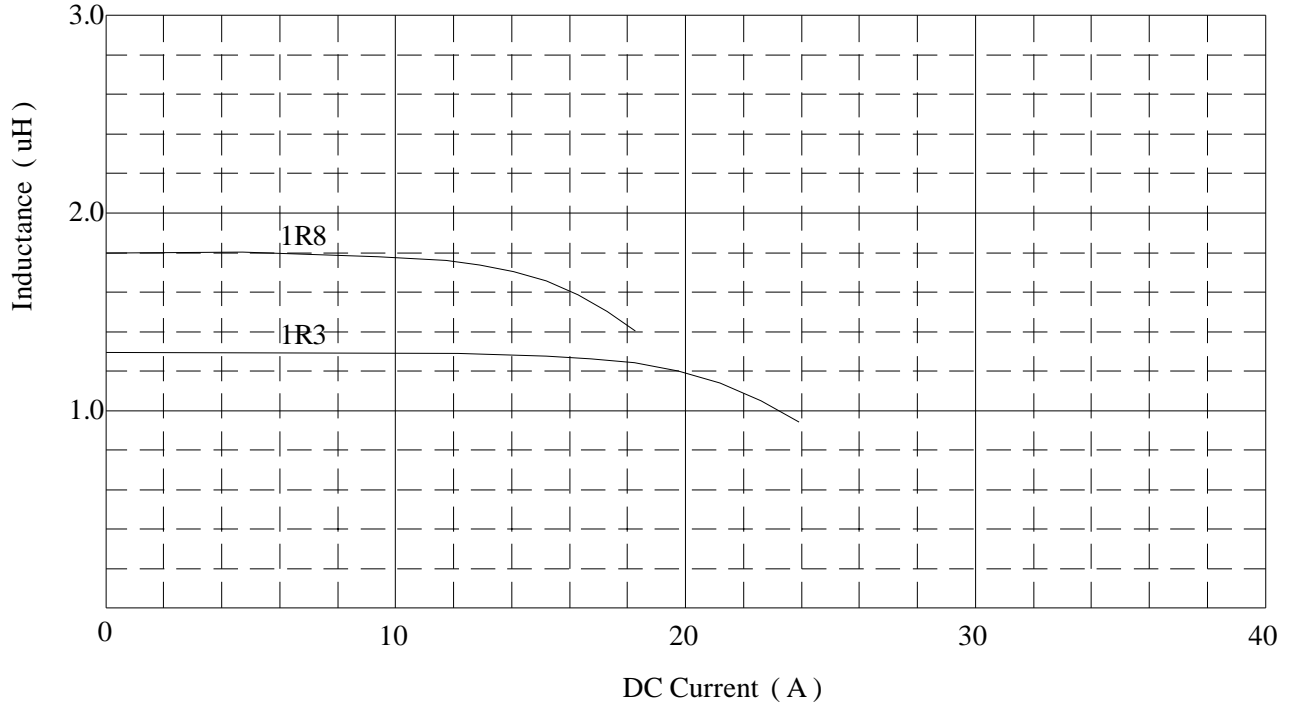
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@ Inductance VS. DC Superposition characteristics



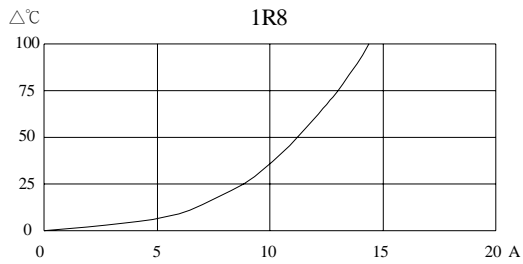
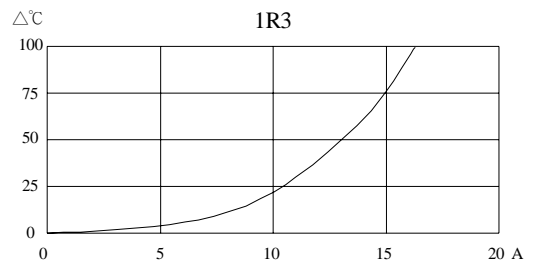
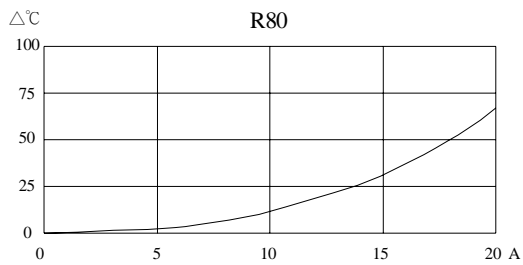
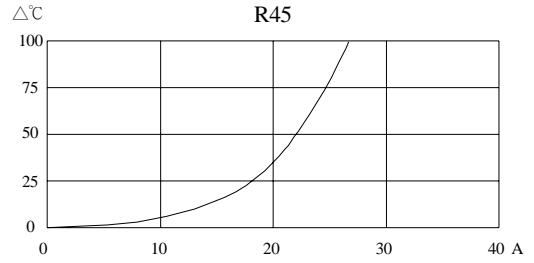
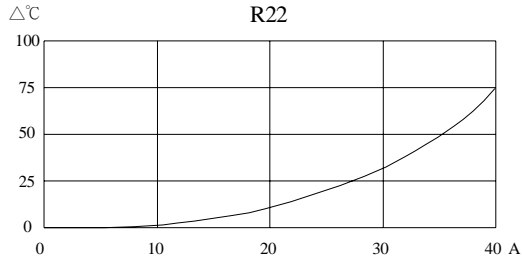
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**@ DC Current VS Temperature Rise**



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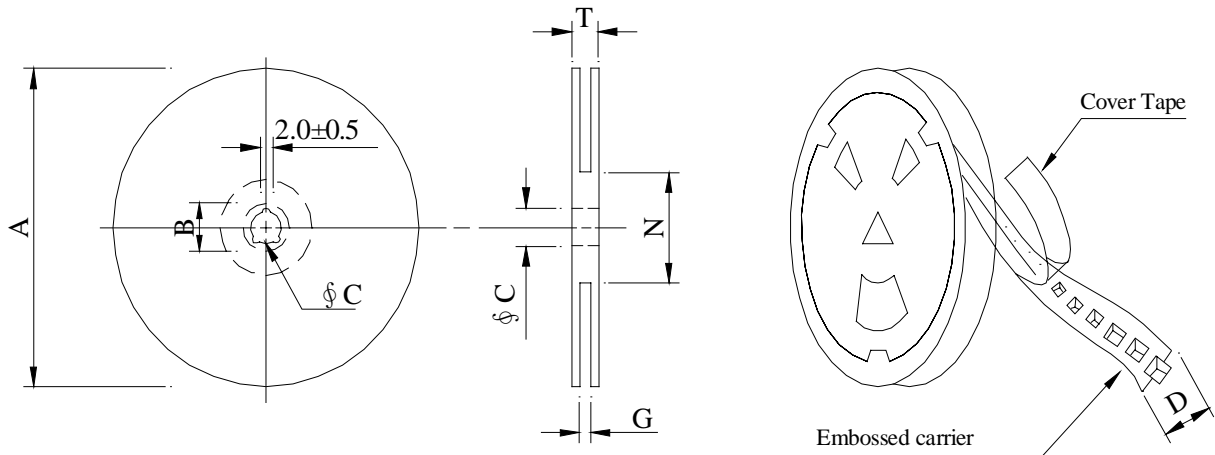
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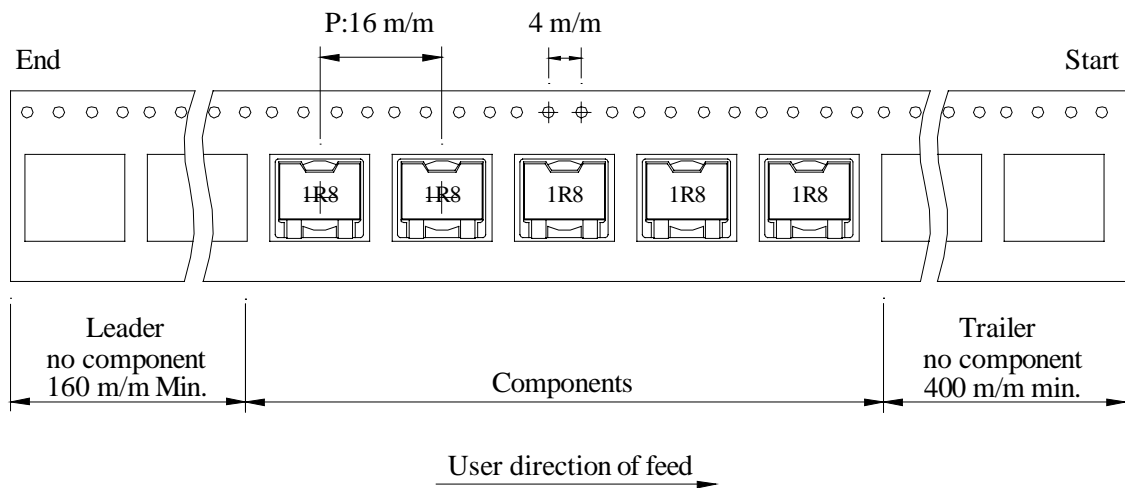
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## VII . PACKAGING INFORMATION :

( 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 <sup>+0</sup>	50 <sup>-0</sup>	30.4

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

Series	Inner : Reel			Outer : Carton		
	Q'TY (pcs)	G.W. (gw)	Style	Q'TY (pcs)	G.W. (Kg)	Size (cm)
SP1045	600	700	13 - 24	2,400	6.50	40 x 40 x 24

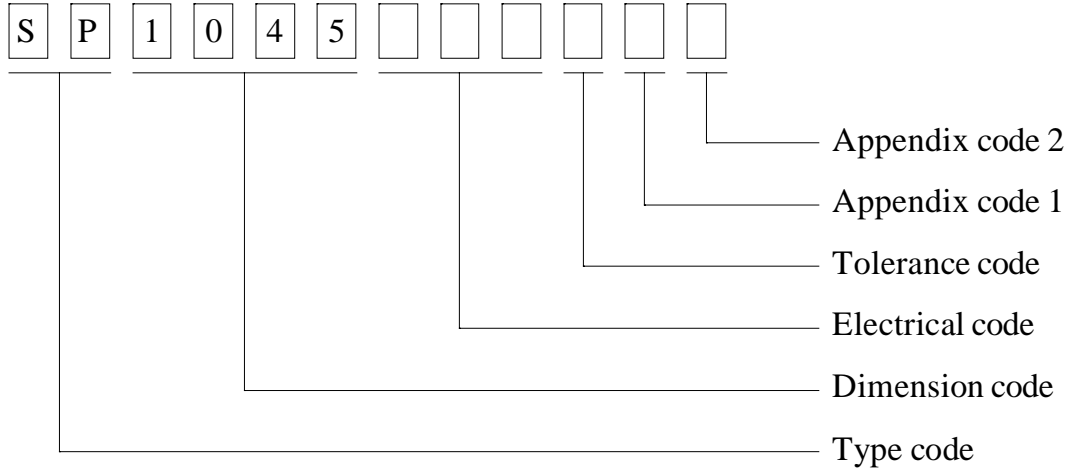
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VII . DWG EXPRESSION :



- Appendix code 1 : S : Standard products  
 A~K , M~R , T~Z : Special products  
 L : Standard Lead Free products  
 1 ~ 9 : Special Lead Free products

Appendix code 2 :

Code	Inner package	Inner package Q'TY	Remark
A	Empty	Empty	
B	T / R ( Reel package )	600 pcs	

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**VIII . RELIABILITY TEST :**

Test item	Specification	Test condition						
Solderability	More than 90% of the terminal electrode shall be covered With fresh solder.	Preheat : 150± 25°C for 60 seconds Solder : Sn96.5 / Ag3 / Cu0.5 or equivalent Solder temp. : 250± 5°C Flux : Rosin Dip time : 4±1 seconds						
Thermal shock test ( Temp. cycle )	Inductance shall not change more than ±20%	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Room temp. 15 minutes</td> <td style="text-align: center;">—————&gt;</td> <td style="text-align: center;"><u>-25± 2 °C</u> 30 minutes</td> </tr> <tr> <td style="text-align: center;">Room temp. 15 minutes</td> <td style="text-align: center;">—————&gt;</td> <td style="text-align: center;"><u>85± 2 °C</u> 30 minutes</td> </tr> </table> <p>Total : 50 cycles</p>	Room temp. 15 minutes	—————>	<u>-25± 2 °C</u> 30 minutes	Room temp. 15 minutes	—————>	<u>85± 2 °C</u> 30 minutes
Room temp. 15 minutes		—————>	<u>-25± 2 °C</u> 30 minutes					
Room temp. 15 minutes		—————>	<u>85± 2 °C</u> 30 minutes					
Humidity Resistance test		Temperature : 40± 2°C Humidity : 90 ~ 95% Applied current : Per spec. Time : 500 hours						
High temp. Resistance test	Temperature : 85± 2°C Applied current : Per spec. Time : 500 hours							

