



## SPECIFICATION FOR APPROVAL

CUSTOMER: \_\_\_\_\_  
CUSTOMER P/N: \_\_\_\_\_  
ATC P/N: DSNS1207-SERIES  
QUANTITY: 0 PCS  
DATE: 2021.02.09

Please confirm your acceptance of this approval sheet by return fax.

APPROVED

REJECTED



DRAWN BY	CHECKED BY	APPROVED BY
林月霞 <i>Alice</i>	張德名 <i>Richard</i>	葉任銘 <i>J.M.Yeh</i>

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# SPECIFICATION

ATC's DWG NUMBER

DSNS1207-SERIES

PROD. NAME

SHIELDED SMD POWER INDUCTOR

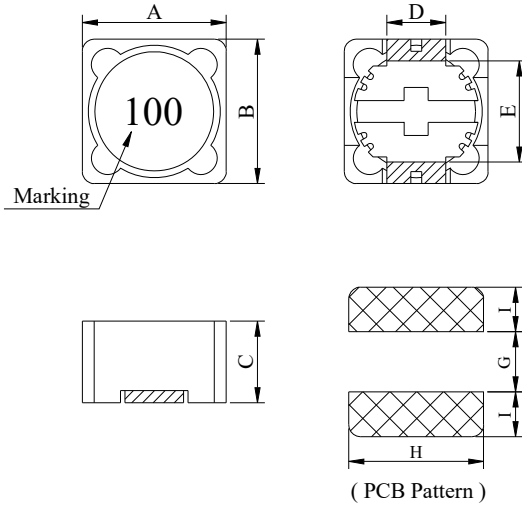
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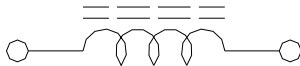
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## 1 Configuration and Dimensions :



Item	Spec. (mm)
A	12.5 max.
B	12.5 max.
C	8.00 max.
D	5.00 typ.
E	7.60 typ.
G	7.00 ref.
H	5.40 ref.
I	2.90 ref.

## 2 Schematic Diagram :



## 3 Rating :

Operating Temperature:  $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

Storage Temperature: Under  $40^{\circ}\text{C}$ , Humidity  $< 75\%$

## 4 Material List :

- a. Core: Ferrite DR core
- b. Core: Ferrite RI core
- c. Wire: Enamelled copper wire (class H)
- d. Adhesive: Epoxy resin
- e. Terminal: Cu / Ni / Sn



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**5 Electrical Characteristics :**

DWG No.	Inductance (uH)	Test Freq. (Hz)	RDC (mΩ)max.	IDC (A)typ.	Tol.
DSNS1207-1R2□Z	1.200	100K	7.000	9.800	N
DSNS1207-2R4□Z	2.400	100K	11.50	8.000	N
DSNS1207-3R5□Z	3.500	100K	13.50	7.500	N
DSNS1207-4R7□Z	4.700	100K	15.80	6.800	N
DSNS1207-6R1□Z	6.100	100K	17.60	6.600	N
DSNS1207-7R6□Z	7.600	100K	20.00	5.900	N
DSNS1207-100□Z	10.00	1K	21.60	5.400	M
DSNS1207-120□Z	12.00	1K	24.30	4.900	M
DSNS1207-150□Z	15.00	1K	27.00	4.500	M
DSNS1207-180□Z	18.00	1K	39.20	3.900	M
DSNS1207-220□Z	22.00	1K	43.20	3.600	M
DSNS1207-270□Z	27.00	1K	45.90	3.400	M
DSNS1207-330□Z	33.00	1K	64.80	3.000	M
DSNS1207-390□Z	39.00	1K	72.90	2.750	M
DSNS1207-470□Z	47.00	1K	100.0	2.500	M
DSNS1207-560□Z	56.00	1K	110.0	2.350	M
DSNS1207-680□Z	68.00	1K	140.0	2.100	M
DSNS1207-820□Z	82.00	1K	160.0	1.950	M
DSNS1207-101□Z	100.0	1K	220.0	1.700	M
DSNS1207-121□Z	120.0	1K	250.0	1.600	M
DSNS1207-151□Z	150.0	1K	280.0	1.420	M
DSNS1207-181□Z	180.0	1K	350.0	1.300	M
DSNS1207-221□Z	220.0	1K	390.0	1.160	M
DSNS1207-271□Z	270.0	1K	560.0	1.060	M
DSNS1207-331□Z	330.0	1K	640.0	0.950	M
DSNS1207-391□Z	390.0	1K	700.0	0.880	M
DSNS1207-471□Z	470.0	1K	980.0	0.790	M
DSNS1207-561□Z	560.0	1K	1070	0.730	M
DSNS1207-681□Z	680.0	1K	1460	0.670	M
DSNS1207-821□Z	820.0	1K	1640	0.600	M

Note:

1. □ -Tolerance: M=±20% / N=+40% -20%
2. IDC base on  $\Delta L / L0A=35\%$  typ.



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### 5 Electrical Characteristics :

DWG No.	Inductance (uH)	Test Freq. (Hz)	RDC (mΩ)max.	IDC (A)typ.	Tol.
DSNS1207-102□Z	1000	1K	1820	0.550	M

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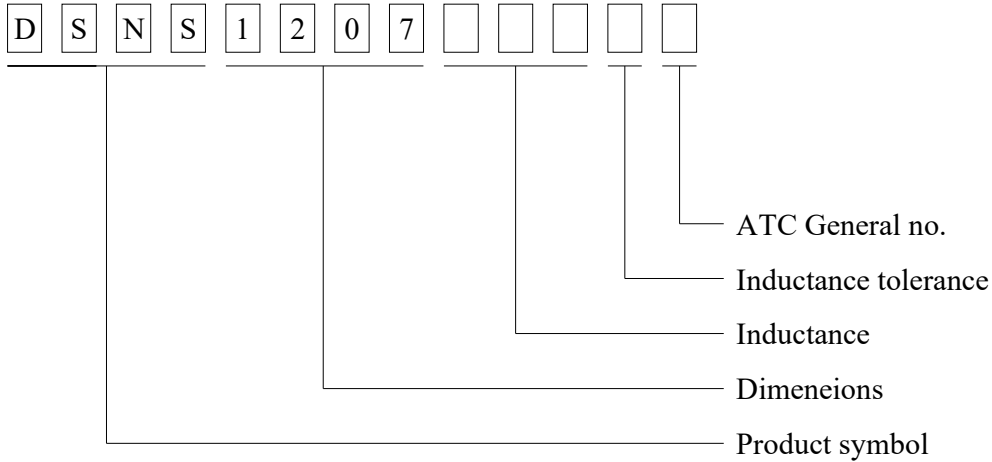
Note:

- -Tolerance: M=±20% / N=+40% -20%
- IDC base on  $\Delta L / L0A=35\%$  typ.



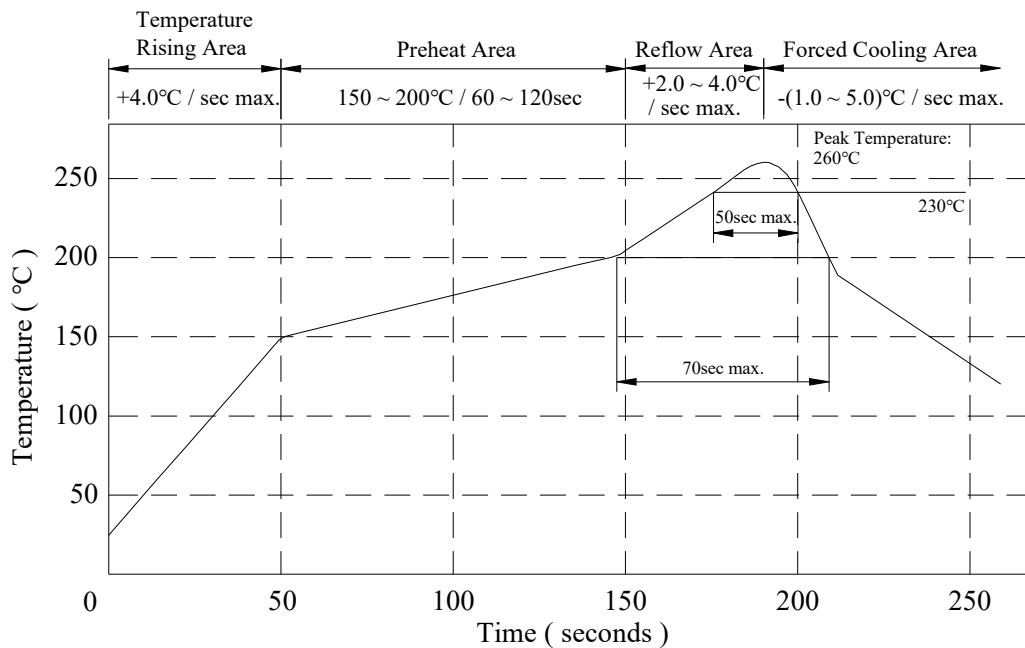
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**6 DWG Expression :**



**7 Classification Reflow Profile :**

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





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**8 Reliability Test :**

1-1.Mechanical Performance

No	Item	Specification	Test Method
1	Vibration	Appearance: No damage Inductance: within±10% of initial value	Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1min Amplitude: 1.5mm Time: 2hrs for each axis (X, Y & Z), total 6hrs
2	Resistance to Soldering Heat	Appearance: No damage	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 260±5°C Immersion Time: 10±1sec
3	Solder ability	The electrodes shall be at least 90% covered with new solder coating	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 245±5°C Immersion Time: 4±1sec
4	Resistance to solvent	There must be no change in appearance or obliteration of marking.	Inductors must withstand 6 minutes of alcohol or water.

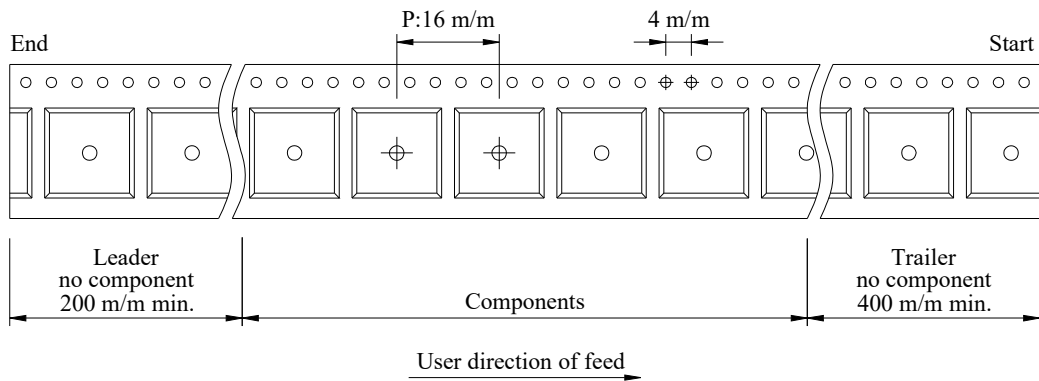
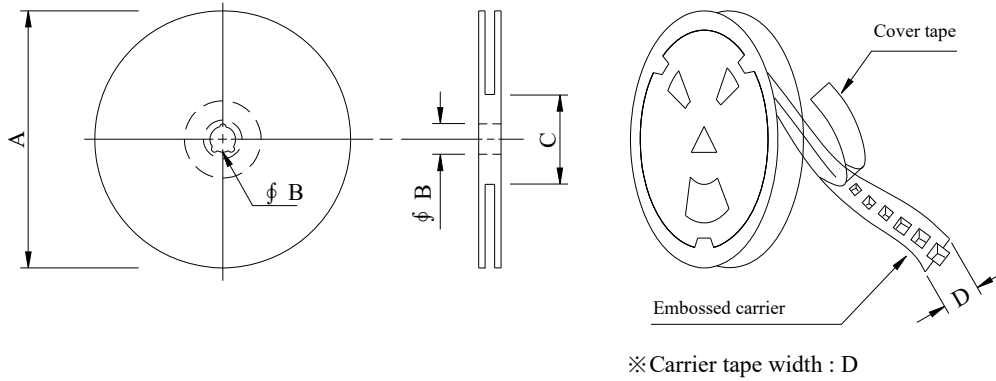
1-2.Environmental Performance

No	Item	Specification	Test Method		
1	Temperature Shock	Appearance: No damage Inductance: within±10% of initial value	10 cycles (Air to Air) 1 cycles shall consist of: 30 minutes exposure to -55 °C 30 minutes exposure to 125 °C 15 seconds maximum transition between temperatures		
2	Temperature Cycle		One cycle:		
			Step	Temperature (°C)	Time (min)
			1	-25±3	30
			2	25±2	3
			3	85±3	30
4	25±2	3			
			Total: 100cycles Measured after exposure in the room condition for 24hrs		
3	Humidity Resistance		Temperature: 40±2°C Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs		
4	Heat Life		Temperature: 85±3°C Relative Humidity: 20% Applied Current: Rated Current Time: 1000hrs Measured after exposure in the room condition for 24hrs		
5	Cold Resistance		Temperature: -25±3°C Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs		



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**9 Packaging Information :**



Reel type	A	B	C	D	Reel Q'ty
13-24	330mm	13mm	100mm	24mm	500pcs