

## Specification Sheet for Approved

Customer Name:	
Customer Part No.:	
Ceaiya Part No:	CMPI0618 Series
Spec No:	L0618

### 【For Customer Approval Only】

If you Approval, Please Stamp

### 【RoHS Compliant Parts】

Approved By	Checked By	Prepared By
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# Specification Sheet for SMD Power Inductor

## 1. Scope

This specification applies to the CMPI0618 Series of wire wound SMD power inductor.

## 2. Product Description and Identification (Part Number)

- 1) Description:  
CMPI0618 series of Wire wound SMD power inductor.
- 2) Product Identification (Part Number)

CMPI  
①
0618  
②
-
1R0  
③
M  
④

- ① Product Series
- ② Choke Size
- ③ Initial Inductance(L @ 0A):1R0=1.0μH
- ④ Inductance Tolerance:M=L+/-20%

## 3. Electrical Characteristics

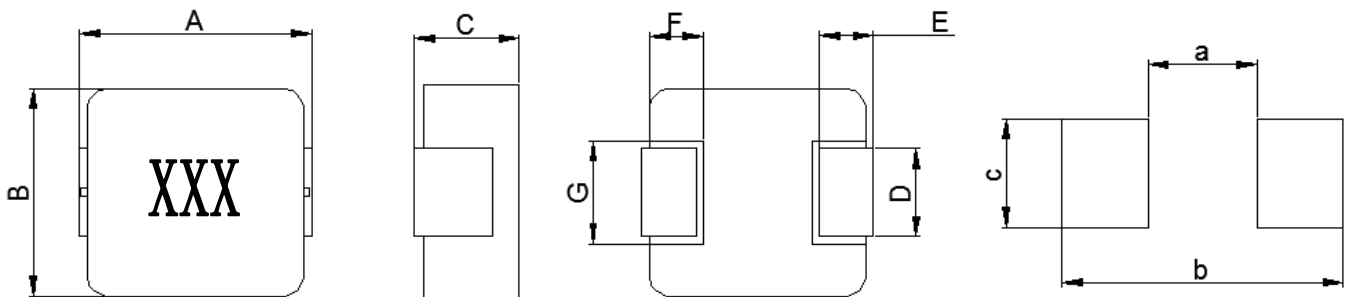
- 1) Operating temperature range (individual chip without packing): -55°C ~ +125°C (Including Self-heating)
- 2) Storage temperature range (On PCB): -40°C ~ +125°C

## 4. Shape and Dimensions (Unit:mm)

Dimensions and recommended PCB pattern for reflow soldering, please see

Mechanical Parameters

Recommended PCB Layout



A	B	C	D	E	F	G	a	b	c
7.10	6.60	2.00	3.00	1.60	2.00	3.60	3.70	8.40	3.50
±0.30	±0.20	Max	±0.30	±0.30	Typ.	Typ.	Typ.	Typ.	Typ.

### Notes:

1. Marking :Ink Marking
2. Stamping XXX :inductor
3. Dimensions of recommended PCB layout are reference only.
4. Do not route traces nor place vias underneath the inductor. Proper layout is required.

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### 5. Electrical Characteristics

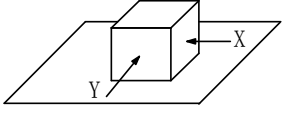
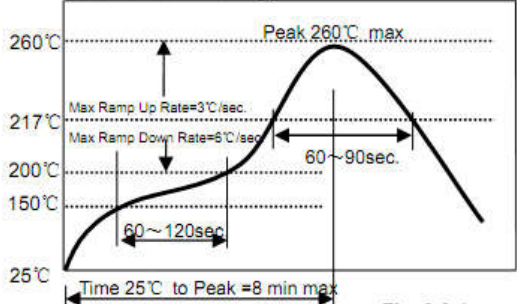
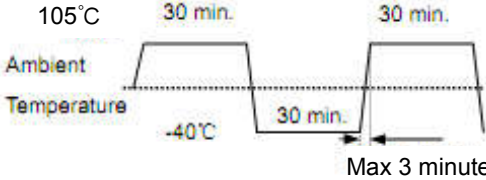
Part Number	Inductance( $\mu$ H) $\pm 20\%$	DCR( $m\Omega$ )		Isat (A) Typ.	Irms (A) Typ.	Marking
		Max	Typ.			
CMPI0618-R10M	0.10	3.1	2.3	40	18	R10
CMPI0618-R22M	0.22	5.0	3.5	27	16	R22
CMPI0618-R47M	0.47	8.5	7.8	18	11	R47
CMPI0618-R68M	0.68	12	10	17	9.5	R68
CMPI0618-1R0M	1.0	17	14.5	14	7.8	1R0
CMPI0618-1R5M	1.5	26	22	10	7.3	1R5
CMPI0618-2R2M	2.2	36	31	8.0	6.0	2R2
CMPI0618-3R3M	3.3	60	53	6.5	4.5	3R3
CMPI0618-4R7M	4.7	78	62	5.0	4.0	4R7
CMPI0618-6R8M	6.8	110	101	4.5	3.0	6R8
CMPI0618-100M	10	155	140	2.5	2.3	100

#### Notes:

1. Initial Inductance ( $L_0$ ) Test Parameters: 100KHz, 1V,  $I_{dc}=0.0A$ ,  $+25^\circ C$
2. All test data is referenced to  $25^\circ C$  ambient;
3. Rated current: Isat or Irms, whichever is smaller;
4. Irms(A): DC current that causes the temperature rise ( $\Delta T = 40^\circ C$ ) from  $25^\circ C$  ambient.
5. Isat(A): DC current at which the inductance drops approximate 30% from its value without current;

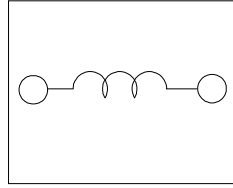
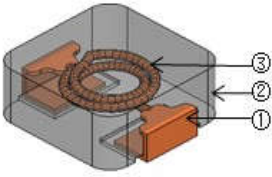
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## 6. Reliability Test

Items	Requirements	Test Methods and Remarks
6.1 Terminal Strength	No removal or split of the termination or other defects shall occur.   Fig.6.1-1	1) Solder the inductor to the testing jig (glass epoxy board shown in Fig.6.1-1) using eutectic solder. Then apply a force in the direction of the arrow. 2) 10N force. 3) Keep time: 5±2s
6.2 High Temperature	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Storage Temperature :125+/-5°C 2) Duration : 96 ±4 Hours 3) Recovery : then measured at room ambient temperature after placing 24 hours.
6.3 Low Temperature	1. No visible mechanical damage 2. Inductance change: Within ±10%	1) Temperature and time: -40±5°C 2) Duration: 96±4 hours 3) TRecovery : then measured at room ambient temperature after placing 24 hours.
6.4 Vibration test	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Frequency range:10HZ~55HZ~10HZ 2) Amplitude:1.5mm p-p 3) Direction:X,Y,Z 4) Time:1 minute/cycle,2hours per axis
6.5 High Temperature Storage Tested	1. No visible mechanical damage. 2. Inductance change: Within ±10%	1) Storage Temperature :60+/-2°C 2) Relative Humidity :90-95% 3) Duration : 96 ±4 Hours 4) Recovery : then measured at room ambient temperature after placing 24 hours.
6.6 Resistance to Soldering Heat	1. No visible mechanical damage. 2. Inductance change: Within ±10%   Fig.6.6-1	1) Re-flowing Profile: Please refer to Fig.6.6-1 2) Test board thickness: 1.0mm 3) Test board material: glass epoxy resin 4) The chip shall be stabilized at normal condition for 1~2 hours before measuring
6.7 Thermal Shock	1. No visible mechanical damage. 2. Inductance change: Within ±10%   Fig.6.7-1	1) Temperature and time: -40±3°C for 30±3 min→105°C for 30±3min, please refer to Fig.6.7-1. 2) Transforming interval: Max, 3 minute 3) Tested cycle: 100 cycles 4) The chip shall be stabilized at normal condition for 1~2 hours before measuring

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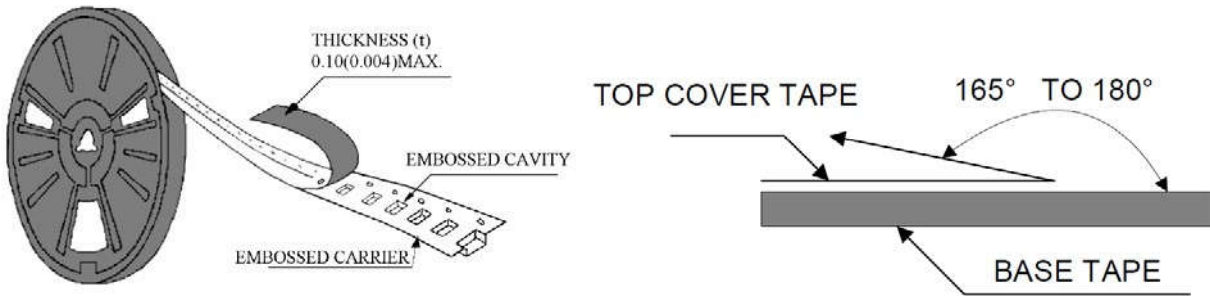
## 7. MATERIAL LIST



NO.	Part Name	Material
1	Electrode	Cu+Sn plating
2	Core	Metal composite core
3	Coil	Copper wire, 220°C

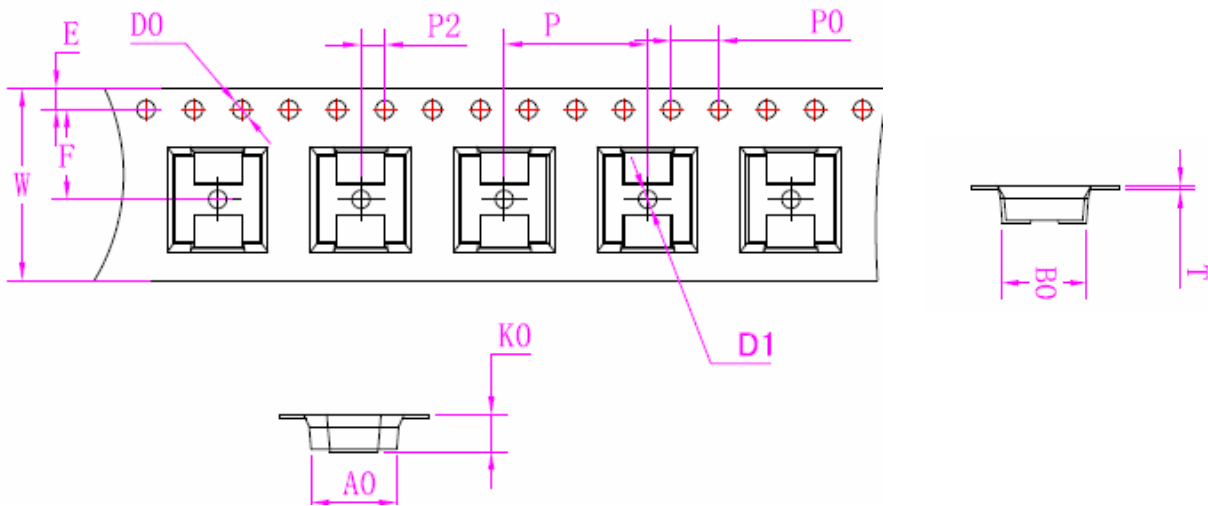
## 8. PACKAGE INFORMATION-mm

### Peel-off Force



The force for peeling off cover tape is 30 to 100 grams in to arrow direction.

### 8.1 Tape Packaging Dimensions



Item	W	A0	B0	K0	P	F	E	D0	D1	P0	P2	T
DIM	16.0	6.9	7.6	2.2	12.0	7.5	1.75	1.5	1.5	4.0	2.0	0.35
Tole	±0.3	Typ.	Typ.	Typ.	±0.1	±0.1	±0.1	±0.1	±0.0	±0.1	±0.1	Typ.

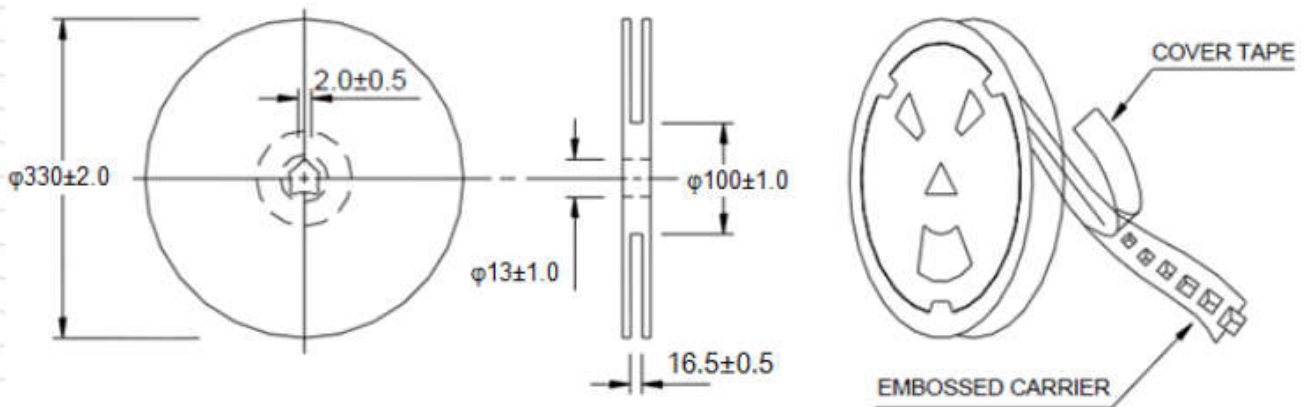
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## 8.2 Taping dimension and tape direction, Leader ,Trailer, section dimension



Leader section	Min.400mm
Carrier tape start size	Min.150mm
Trailer section size	Min.150mm

## 8.3 Reel Dimensions



## 8.4 Taping Quantity

2000pieces/Reel,

## 8.5 Carton

Pizza packaging:3Reel/ Pizza Box

External Packaging :3 Boxes/Carton

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