

## Specification Sheet for Approved

|                    |             |
|--------------------|-------------|
| Customer Name:     |             |
| Customer Part No.: |             |
| Ceaiya Part No:    | CMPI0624 系列 |
| Spec No:           | L0624       |

**【For Customer Approval Only】**

If you Approval, Please Stamp

**【RoHS Compliant Parts】**

| Approved By | Checked By | Prepared By |
|-------------|------------|-------------|
| 李庆辉         | 刘志坚        | 劳水花         |

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# Specification Sheet for SMD Power Inductor

## 1. Scope

This specification applies to the CMPI0624 Series of wire wound SMD power inductor.

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

1) Description:

CMPI0624 series of Wire wound SMD power inductor.

2) Product Identification (Part Number)

CMPI      0624      -      R68      M  
 ①              ②                              ③              ④

① Product Series

② ChokeSize

③ InitialInductance(L@ 0A):1R0=1.0μH

④ InductanceTolerance:M=L+/-20%

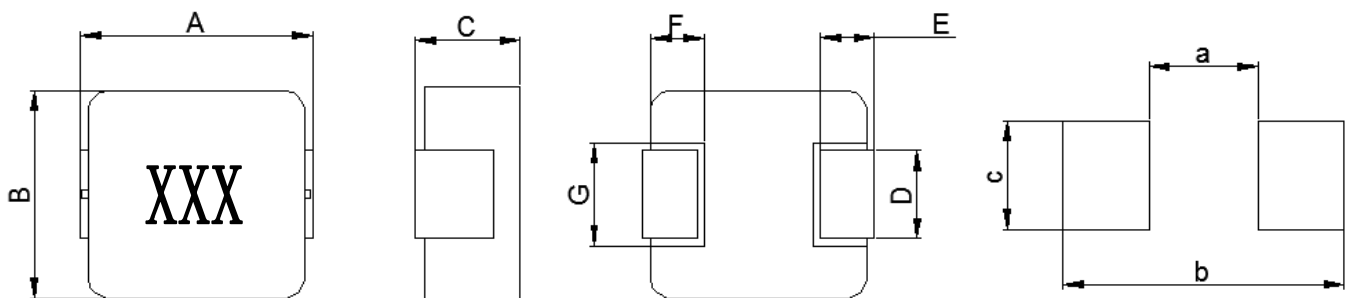
## 3. Electrical Characteristics

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)

Mechanical Parameters RecommendedPCBLayout



| A     | B     | C   | D     | E     | F    | G    | a    | b    | c    |
|-------|-------|-----|-------|-------|------|------|------|------|------|
| 7.10  | 6.60  | 2.5 | 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 or place vias underneath the inductor. Proper layout is required.

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### 5. Electrical Characteristics

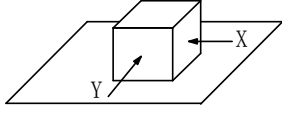
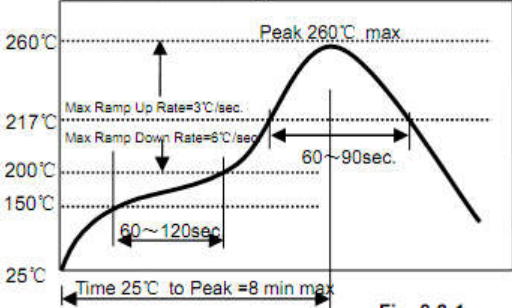
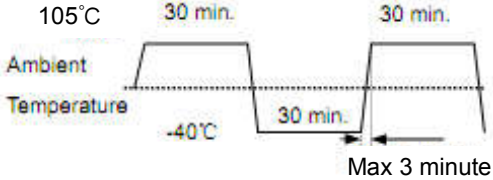
| Part Number    | L0(uH)<br>±20% | DCR(mΩ)<br>@25°C |      | Isat(Amp)<br>Typ. | Irms(Amp)<br>Typ. |
|----------------|----------------|------------------|------|-------------------|-------------------|
|                |                | Max.             | Typ. |                   |                   |
| CMPI0624-R22M  | 0.22           | 3.0              | 2.5  | 34.0              | 21.0              |
| CMPI0624-R33M  | 0.33           | 4.1              | 3.5  | 24.5              | 18.0              |
| CMPI0624-R47M  | 0.47           | 5.1              | 4.5  | 22.0              | 15.0              |
| CMPI0624-R56M  | 0.56           | 6.5              | 5.5  | 17.0              | 13.0              |
| CMPI0624-R68M  | 0.68           | 7.5              | 6.5  | 16.0              | 12.0              |
| CMPI0624-1R0M  | 1.0            | 15.0             | 13.5 | 16.0              | 9.0               |
| CMPI0624-1R5M  | 1.5            | 20               | 17   | 13.5              | 9.0               |
| CMPI0624--2R2M | 2.2            | 28               | 23   | 11.0              | 7.0               |
| CMPI0624-3R3M  | 3.3            | 39               | 32   | 8.5               | 5.5               |
| CMPI0624-4R7M  | 4.7            | 55               | 45   | 7.5               | 5.0               |
| CMPI0624-5R6M  | 5.6            | 65               | 55   | 6.8               | 4.6               |
| CMPI0624-6R8M  | 6.8            | 70               | 62   | 6.0               | 4.0               |
| CMPI0624-100M  | 10             | 101              | 92   | 4.0               | 3.1               |
| CMPI0624-150M  | 15             | 160              | 145  | 3.3               | 2.5               |

#### Notes:

1. InitialInductance(L0)TestParameters:100KHz,1V,Idc=0.0A,+25°C
2. All test data is referenced to 25°C ambient;
3. Rated current: Isat or Irms, whichever is smaller;
4. Irms(A):DC current that causes the temperature rise ( $\Delta T = 40^\circ \text{C}$ ) from  $25^\circ \text{C}$  ambient.
5. Isat(A):DC current at which the inductance drops approximate 30% from its value without current;

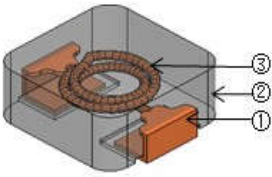
# Specification Sheet for SMD Power Inductor

## 6. Reliability Test

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

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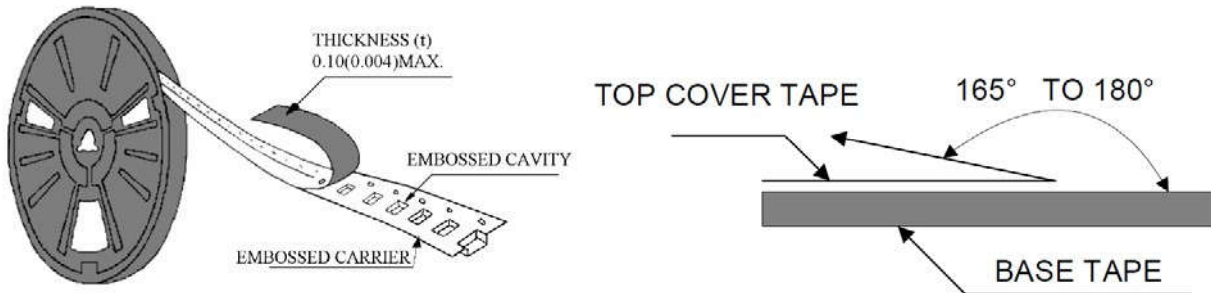
## 7. MATERIALLIST



| NO. | Part Name | Material           |
|-----|-----------|--------------------|
| 1   | Electrode | Cu+Snplating       |
| 2   | Core      | Metalcompositecore |
| 3   | Coil      | Copperwire,220°C   |

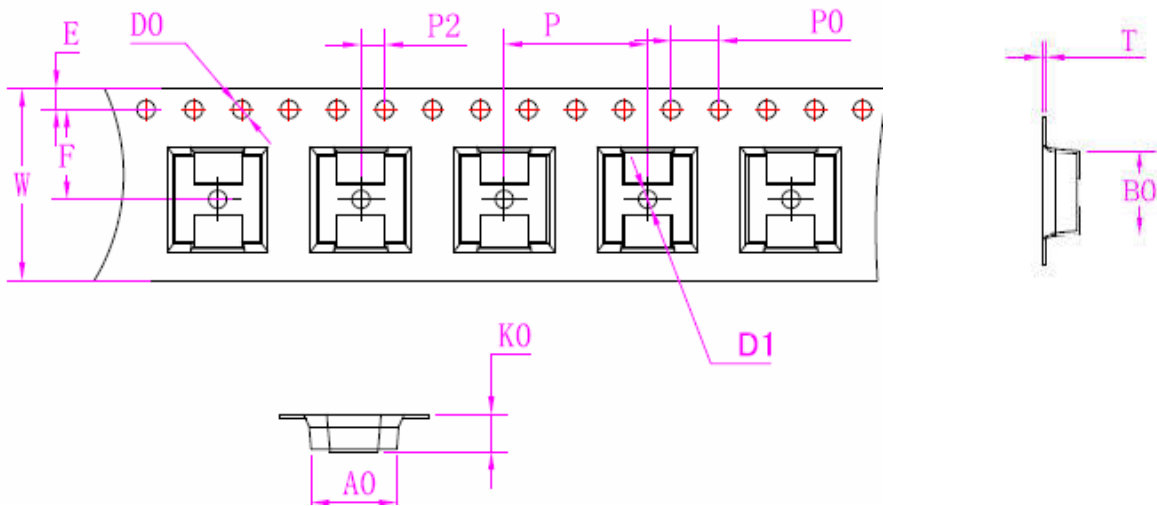
## 8. PACKAGE INFORMATION-mm

### Peel-off Force



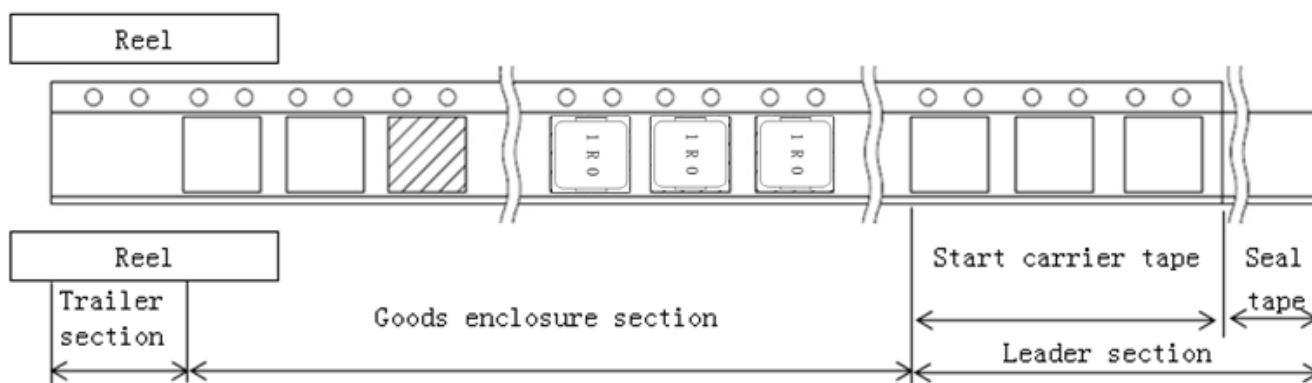
The force for peeling off cover tape is 30 to 100 grams in to arrow direction.

### 8.1 Tape Packaging Dimensions



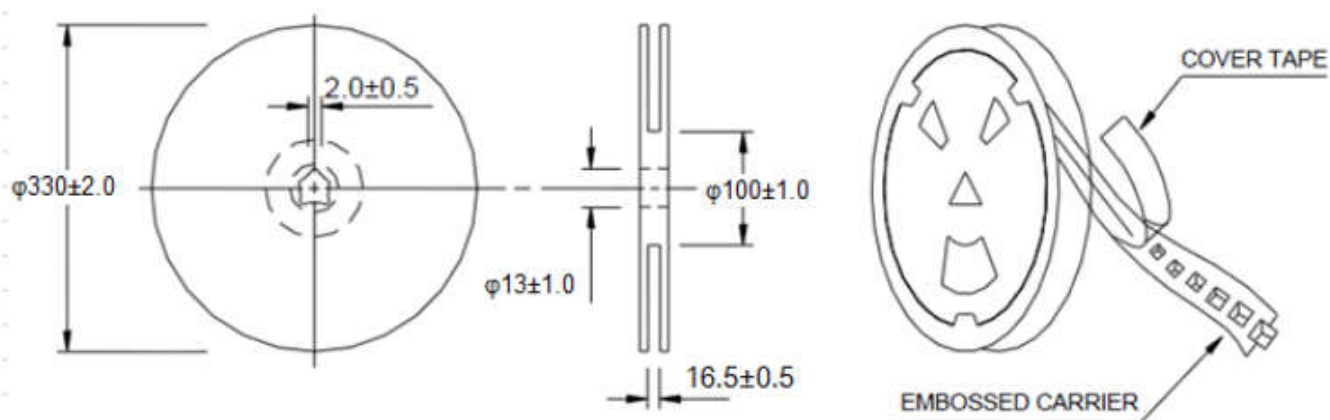
| Item | W    | A0   | B0   | K0   | P    | F    | E    | D0   | D1   | P0   | P2   | T    |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| DIM  | 16.0 | 6.9  | 7.6  | 2.6  | 12.0 | 7.5  | 1.75 | 1.5  | 0.00 | 4.0  | 2.0  | 0.35 |
| Tole | ±0.3 | Typ. | Typ. | Typ. | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.0 | ±0.1 | ±0.1 | Typ. |

### 8.2 Taping dimension and taping 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

1500 pieces/Reel,

### 8.5 Carton

Pizza packaging: 3 Reel/Pizza Box

External Packaging: 3 Boxes/Carton

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