

## Specification Sheet for Approved

Customer Name:	
Customer Part No.:	
Ceaiya Part No:	CMPI0630 Series
Spec No:	L0630

## 【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

### 【Version of Changed Record】

Rev.	Effective Date	Changed Contents	Change Reasons	Approved By
A0	2024-01-18	New release	/	Li qing hui

# Specification Sheet for SMD Power Inductor

## 1. Scope

This specification applies to the CMPI0630 Series of wire wound SMD power inductor.

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

1) Description:

CMPI0630 series of Wire wound SMD power inductor.

2) Product Identification (Part Number)

CMPI  
①
0630  
②
-
1R0  
③
M  
④

① Product Series

② Choke Size

③ Initial Inductance(L @ 0A):1R0=1.0μH

④ Inductance Tolerance:M=±20%

## 3. Electrical Characteristics

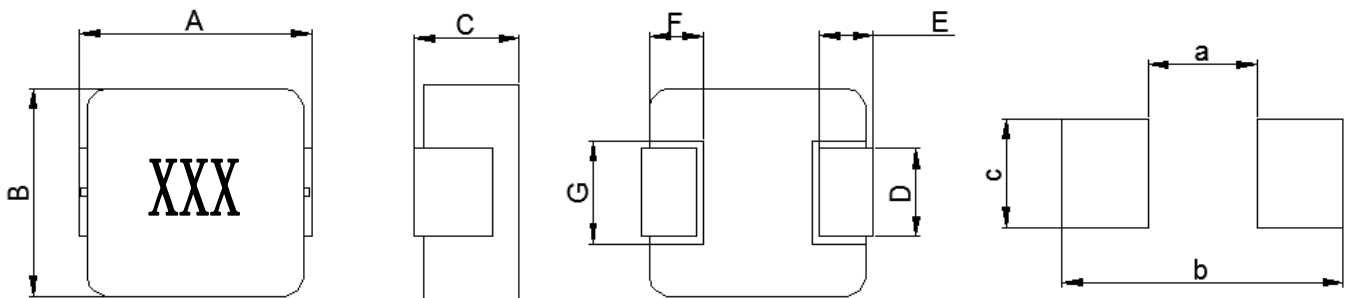
1) Operating temperature range (individual chip without packing): -40°C ~ +125°C (Including Self-heating)

2) Storage temperature range (On PCB ): -40°C ~ +125°C

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

Mechanical Parameters

Recommended PCB Layout



A	B	C	D	E	F	G	a	b	c
7.10	6.60	3.00	3.00	1.60	2.00	3.60	3.70	8.40	3.50
±0.30	±0.20	Max	±0.35	±0.35	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	L0(uH)	DCR(mΩ) @25°C		Isat(Amp) Typ.	Irms(Amp) Typ.
		Max.	Typ.		
CMPI0630-R10N	0.10 ± 30%	1.2	0.9	56	32
CMPI0630-R15N	0.15 ± 30%	2.5	1.5	38	25
CMPI0630-R22M	0.22 ± 20%	3.0	2.5	34	23
CMPI0630-R33M	0.33 ± 20%	4.5	3.0	24	20
CMPI0630-R47M	0.47 ± 20%	5.0	4.0	20	18
CMPI0630-R56M	0.56 ± 20%	5.5	4.5	18	16.5
CMPI0630-R68M	0.68 ± 20%	5.5	4.8	17.0	14.0
CMPI0630-R82M	0.82 ± 20%	7.0	6.5	16.0	13.0
CMPI0630-1R0M	1.0 ± 20%	10.0	8.2	15.0	12.0
CMPI0630-1R2M	1.2 ± 20%	15.0	11.2	14.0	10.0
CMPI0630-1R5M	1.5 ± 20%	15.0	11.2	14.0	9.0
CMPI0630-2R2M	2.2 ± 20%	20.0	15.2	10.0	8.0
CMPI0630-3R3M	3.3 ± 20%	35.8	27.5	9.5	6.5
CMPI0630-4R7M	4.7 ± 20%	39.7	30.5	6.5	5.5
CMPI0630-5R6M	5.6 ± 20%	44.5	36.5	6.0	5.5
CMPI0630-6R8M	6.8 ± 20%	63.6	53.0	6.0	5.0
CMPI0630-8R2M	8.2 ± 20%	63.6	53.0	5.5	4.5
CMPI0630-100M	10 ± 20%	75.0	62.0	5.0	4.0
CMPI0630-150M	15 ± 20%	125	101	4.0	3.5
CMPI0630-220M	22 ± 20%	200	150	3.2	2.3
CMPI0630-330M	33 ± 20%	310	250	3.0	2.0
CMPI0630-470M	47 ± 20%	310	260	2.0	1.7

**Notes:**

1. Initial Inductance (Lo) Test Parameters: 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° C ambient.
5. Isat(A): DC current at which the inductance drops approximate 30% from its value without current.
6. Impulse testing standards: 65V

**Measuring Instrument :**

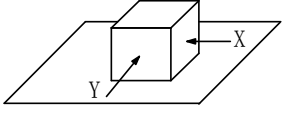
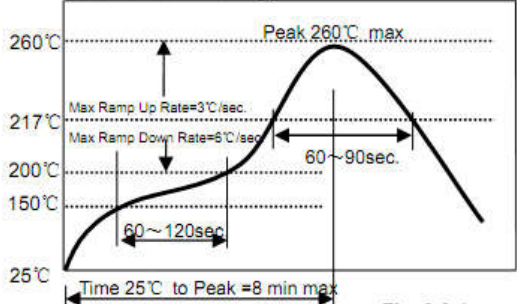
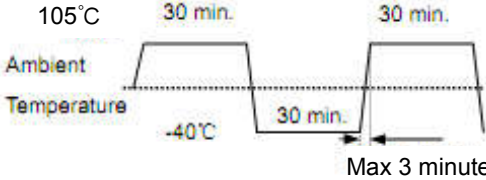
L:HIOKI3532-50

DCR:HIOKI 3540

Isat / Irise: 6377&6220Microtest

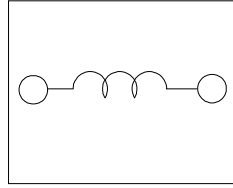
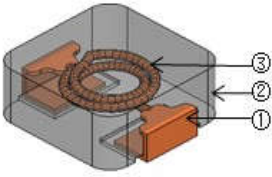
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## 6. Reliability Test

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) Recovery : 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 minutes 3) Tested cycle: 100 cycles 4) The chip shall be stabilized at normal condition for 1~2 hours before measuring

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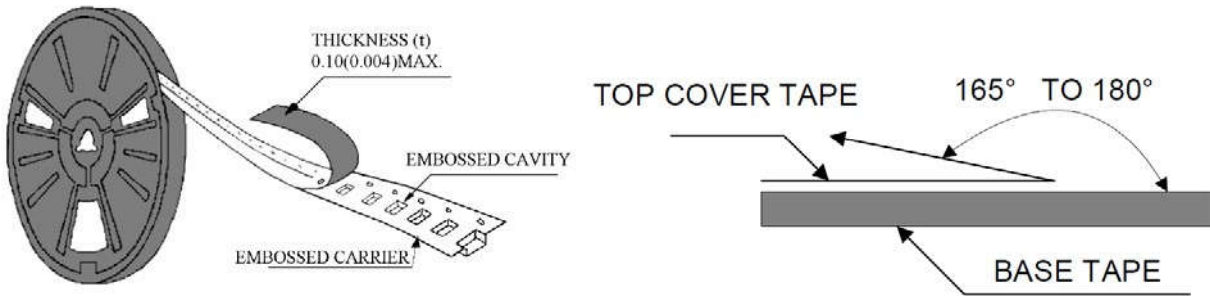
## 7. MATERIAL LIST



NO.	Part Name	Material
1	Electrode	Cu+Sn plating C1100
2	Core	Metal composite core
3	Coil	Copper wire

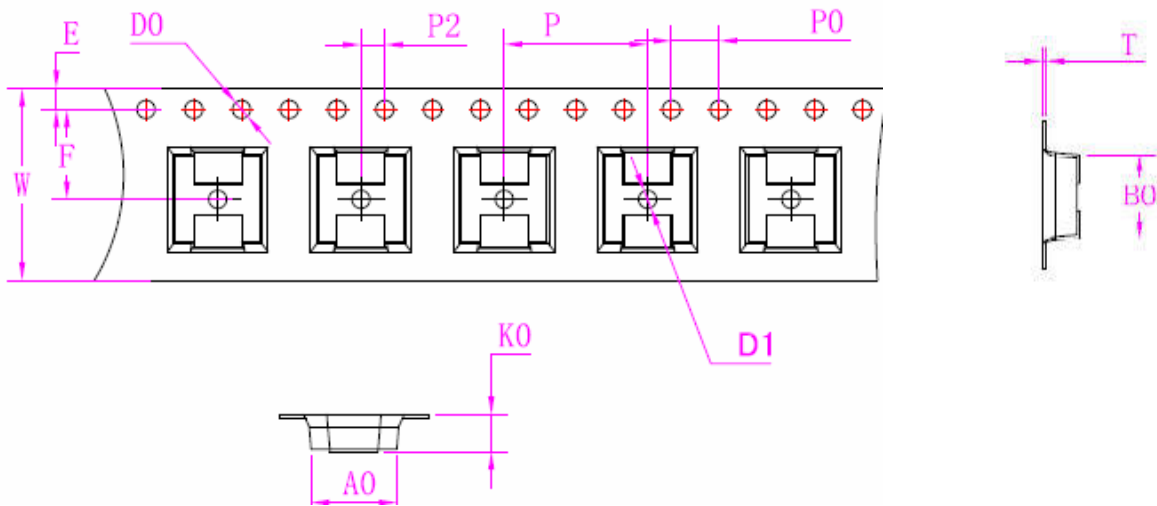
## 8. PACKAGE INFORMATION-mm

### 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	3.2	12.0	7.5	1.75	1.5	1.50	4.0	2.0	0.35
Tole	±0.3	Typ.	Typ.	Typ.	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	Typ.

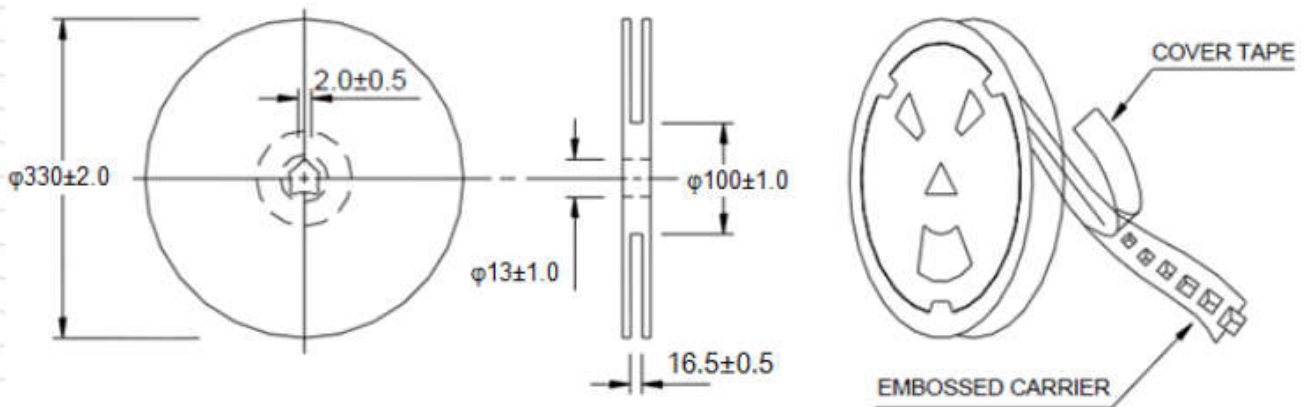
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## 8.2 Taping dimension and tape direction, Leader ,Trailer, section dimension



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

## 8.3 Reel Dimensions



## 8.4 Taping Quantity

1500pieces/Reel,

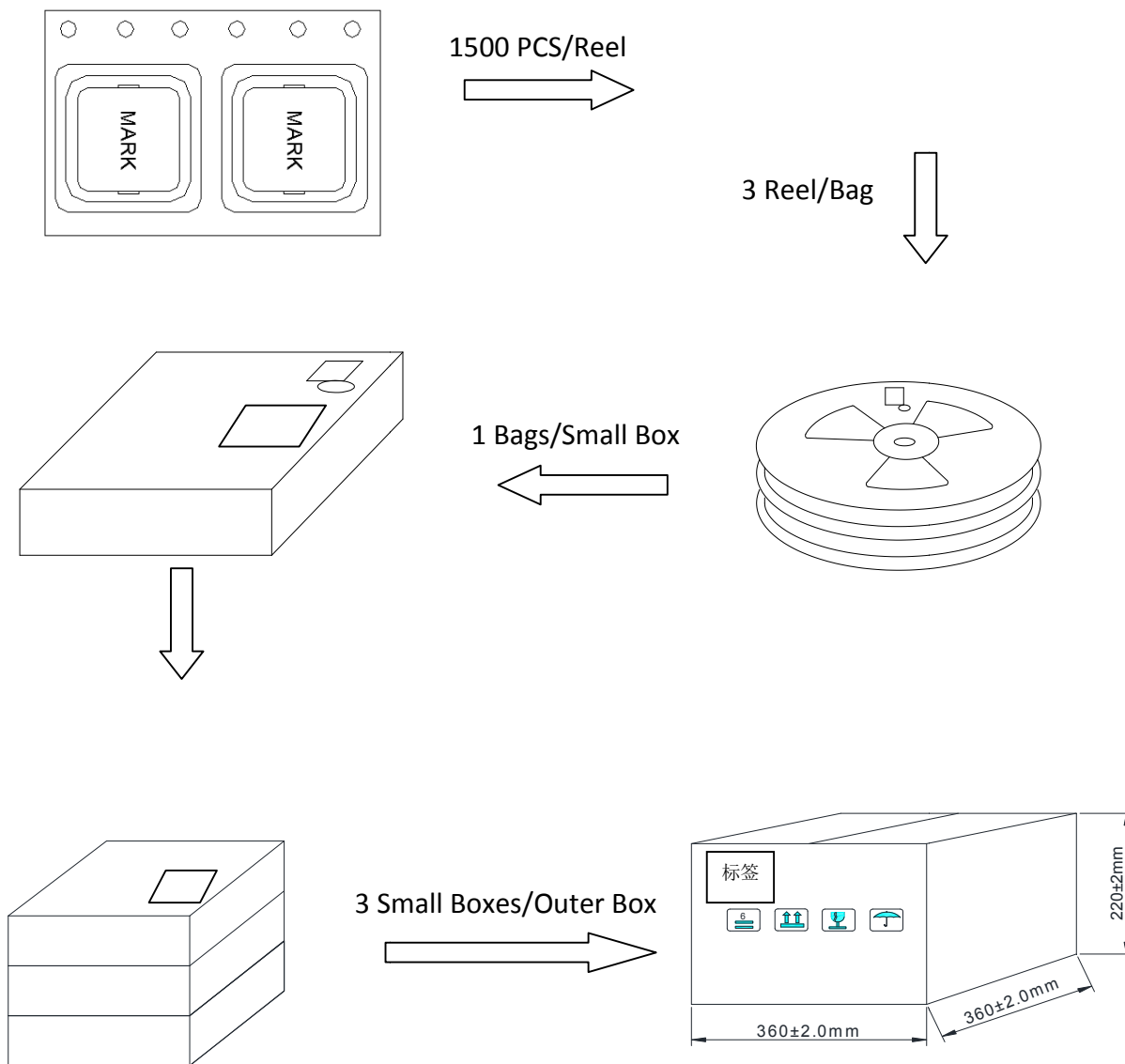
## 8.5 Carton

Pizza packaging: 3Reel/ Pizza Box

External Packaging :3 Boxes/Carton

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## 9. PACK :



内箱规格: 350\*340\*60 mm

外箱规格: 360\*360\*220 mm



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