

Specification Sheet for Approved

Customer Name:	
Customer Part No.:	
Ceaiya Part No:	CMPI1770 Series
Spec No:	L1770

【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	2025-06-06	New release	/	Li qing hui

Specification Sheet for SMD Power Inductor

1. Scope

This specification applies to the CMPI1770 Series of wire wound SMD power inductor.

2. Product Description and Identification (Part Number)

1) Description:

CMPI1770 series of Wire wound SMD power inductor.

2) Product Identification (Part Number)

CMPI **1770** - **220** **M**
 ① ② ③ ④

① Product Series

② Choke Size

③ Initial Inductance(L @ 0A): 220=22 μ H

④ Inductance Tolerance:M=± 20%

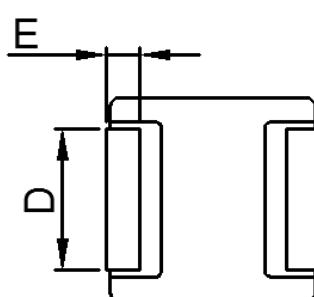
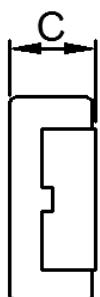
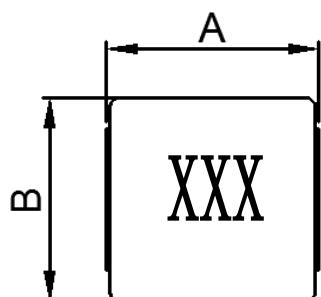
3. Electrical Characteristics

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

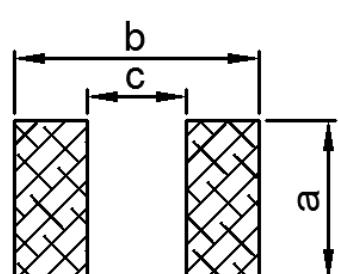
2) Storage temperature range (On PCB): -40°C ~ +125°C

4. Shape and Dimensions (Unit:mm)

MECHANICAL PARAMETERS



RECOMMENDED PCB LAYOUT



A	B	C	D	E	a	b	c
17.5	17.0	7.0	12.0	2.5	12.3	18.2	11.2
±1.0	±0.50	Max	±0.50	±0.50	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

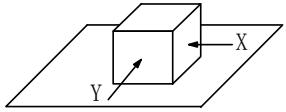
Part Number	L0(uH) ±20%	DCR(mΩ) @25°C		Isat(Amp)	Irms(Amp)
		Max.	Typ.	Typ.	Typ.
CMPI1770-2R2M	2.2	2.65	2.30	34.0	29.0
CMPI1770-3R3M	3.3	3.95	3.29	30.0	24.0
CMPI1770-4R7M	4.7	5.00	4.30	24.0	21.0
CMPI1770-6R8M	6.8	7.60	6.55	21.0	17.0
CMPI1770-100M	10	11.0	9.00	19.0	12.0
CMPI1770-150M	15	17.0	14.1	14.5	11.0
CMPI1770-220M	22	26.0	20.0	11.5	8.5
CMPI1770-330M	33	37.0	30.8	10.0	8.0
CMPI1770-470M	47	47.0	39.1	7.5	6.0
CMPI1770-680M	68	85.0	70.8	6.5	5.2
CMPI1770-101M	100	130.0	108.3	5.0	3.7

Notes:

1. Initial Inductance (L0) Test Parameters: 100KHz, 1.0V, Idc=0.0A, +25°C
2. Rated current: Isat or Irms, whichever is smaller;
3. Isat: DC current at which the inductance drops 30% from its value without saturation.
4. Irms: DC current that causes the temperature rise ($\Delta T = 40^\circ\text{C}$) from ambient temperature.
5. Absolute maximum voltage: 60V DC

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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%	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%	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

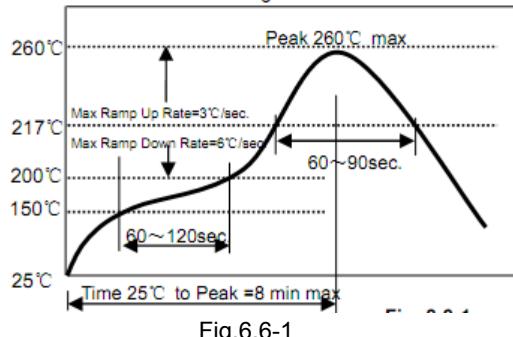


Fig.6.6-1

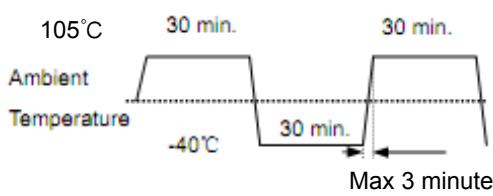
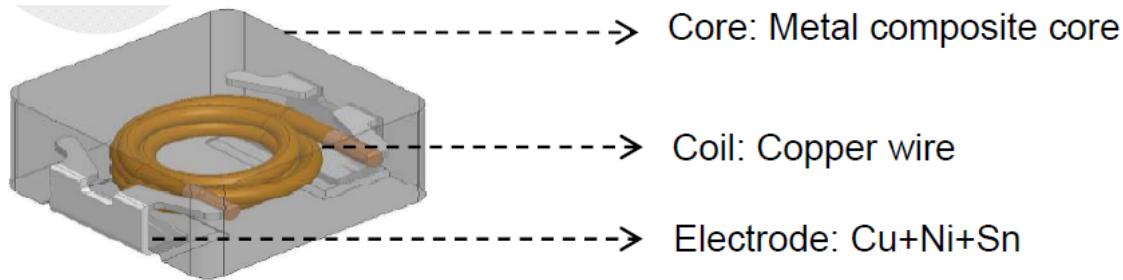


Fig.6.7-1

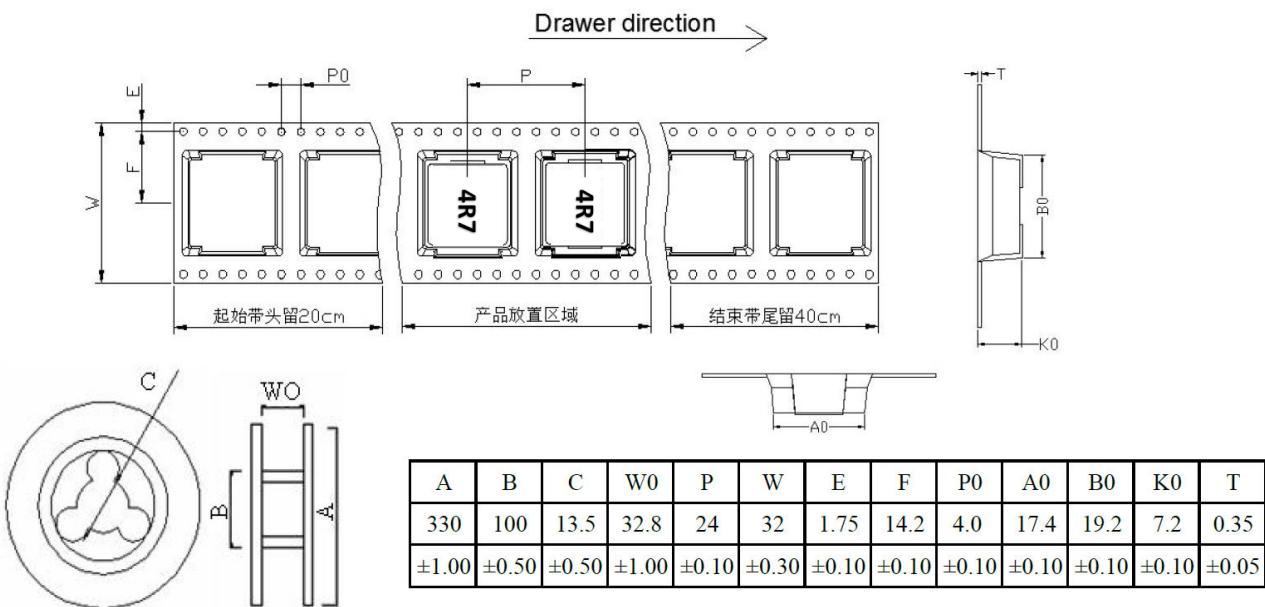
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7. MATERIAL LIST

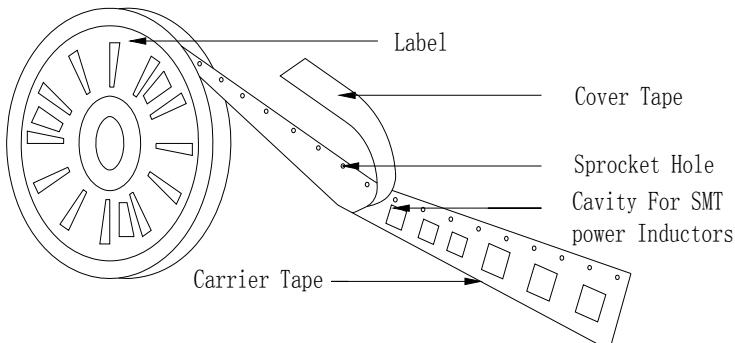


8. PACKAGE INFORMATION-mm

8.1 Tape & Reel Packaging Dimensions



8.2 Reel dimensions(mm)



8.3 Taping Quantity

200pieces/Reel