

Specification Sheet for Approved

Customer Name:	
Customer Part No.:	
Ceaiya Part No:	CMPI0523D-R33M
Spec No:	L0523

【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	2023-07-11	New release	/	Li qing hui

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1. Scope

This specification applies to the CMPI0523D Series of wire wound SMD power inductor.

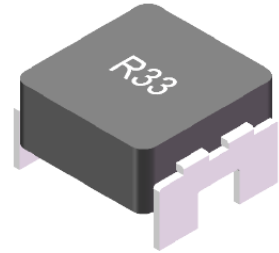
2. Product Description and Identification (Part Number)

1) Description:

CMPI0523D series of Wire wound SMD power inductor.

2) Product Identification (Part Number)

CMPI
①
0523D
②
-
R33
③
M
④



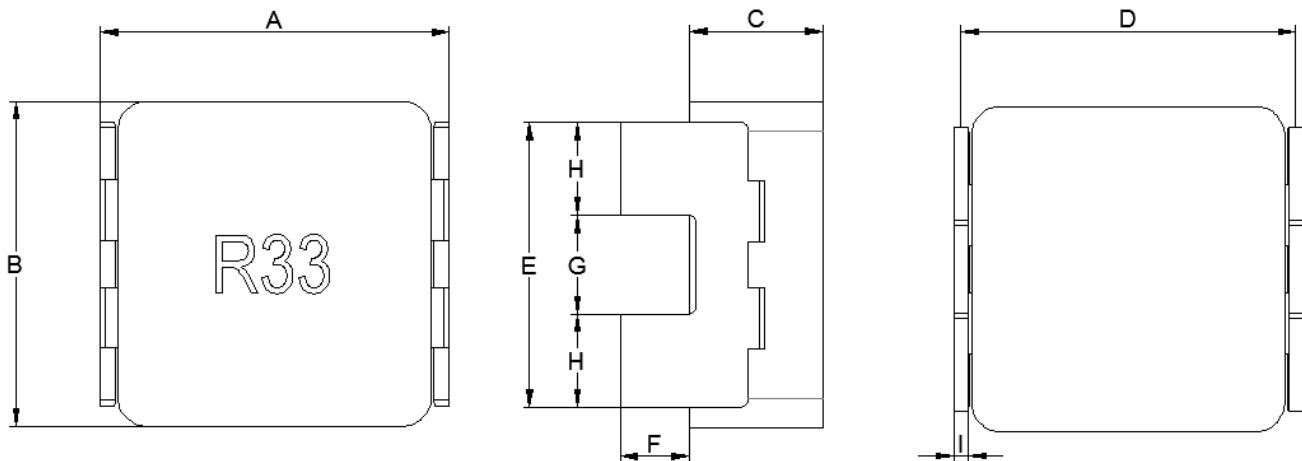
- ① Product Series
- ② Choke Size
- ③ Initial Inductance(L @ 0A):R33=0.33μH
- ④ Inductance Tolerance:M=L+/-20%

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



A	B	C	D	E	F	G	H	I
6.0±0.3	5.6±0.2	2.3±0.2	5.8±0.2	4.9±0.2	1.3Max	1.7±0.1	1.6 ±0.1	0.2±0.05

Notes:

- 1. Marking :Ink Marking
- 2. Stamping XXX :inductor

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3. Electrical Characteristics

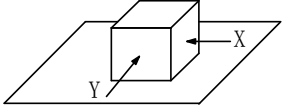
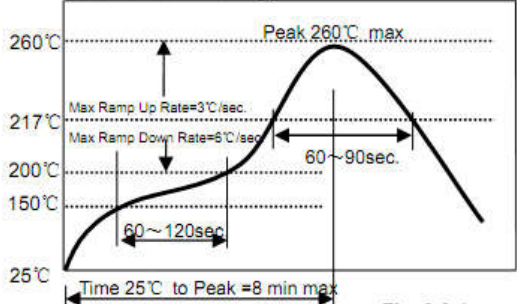
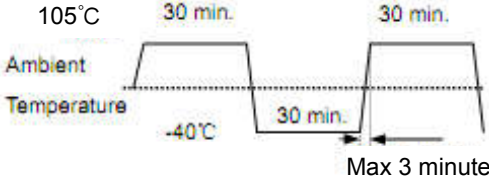
Part Number	L0(uH) ± 20%	DCR(mΩ) @25°C		Isat(Amp) Typ.	Irms(Amp) Typ.
		Max.	Typ.		
CMPI0523D-R33M	0.33	4.20	3.55	18	14

Notes:

1. Initial Inductance (L0) Test Parameters: 1MHz, 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. Isat(A): DC current at which the inductance drops approximate 30% from its value without current;
5. Irms(A): DC current that causes the temperature rise ($\Delta T = 40^\circ \text{C}$) from 25° C ambient.

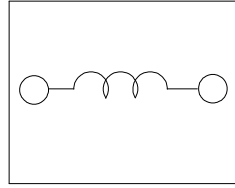
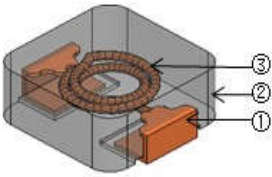
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4. Reliability Test

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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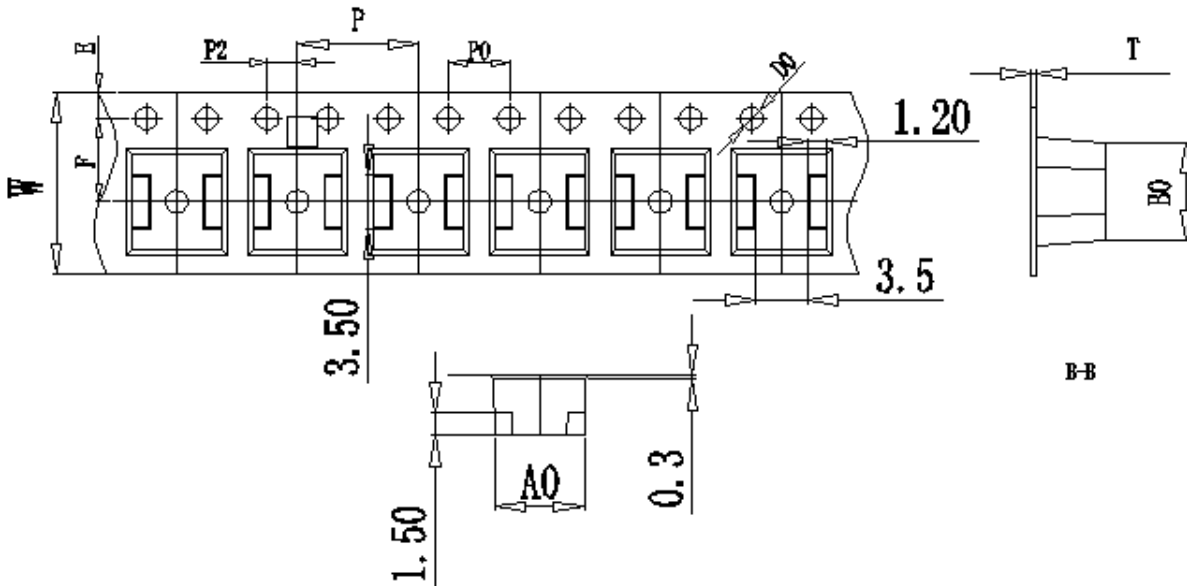
7. MATERIAL LIST



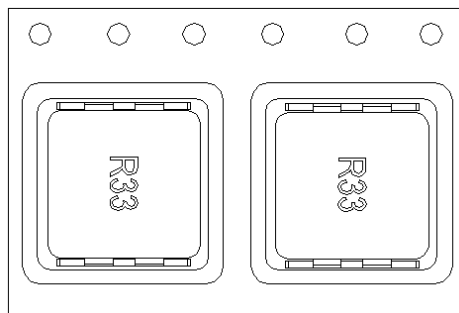
NO.	Part Name	Material
1	Electrode	Cu+Sn plating
2	Core	Metal composite core
3	Coil	Copper wire, 220°C

8. PACKAGE INFORMATION-mm

8.1 Tape Packaging Dimensions

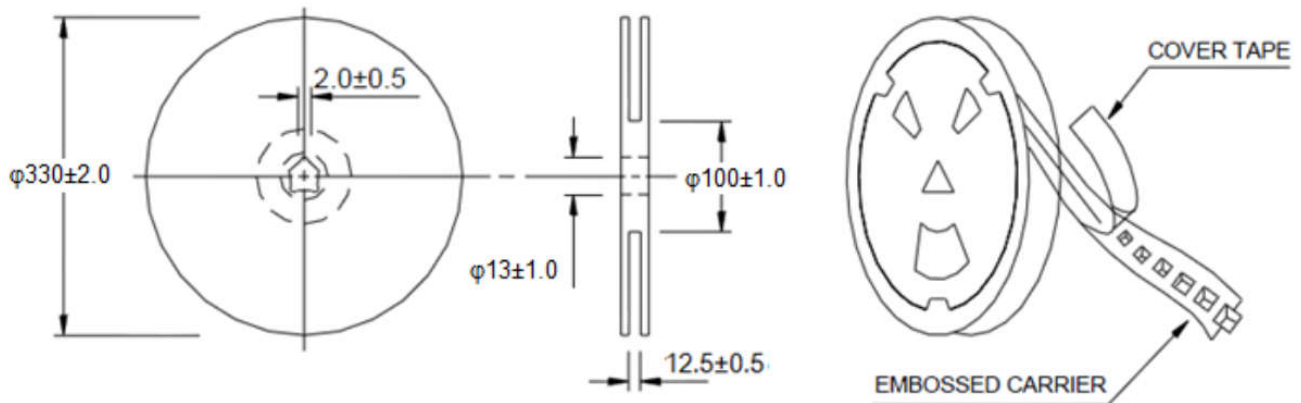


Item	W	A0	B0	K0	P	F	E	D0	P0	P2	T
DIM	12.0	5.9	6.4	4.0	8.0	5.5	1.75	1.5	4.0	2.0	0.40
Tole	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	Typ.



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8.2 Reel Dimensions



Taping Quantity

800pieces/Reel