



Power Inductor ECDH0630F Series Product Specifications

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Power Inductor — ECDH0630F Series



Parts Number Explanation

Example:

ECD	H0630	F	101	M	T	W	Z
Product Type	Size (mm)	Application	Inductance (uH)	Tolerance	Package	Internal Code	Optional
Wire-wound Power Inductor	H0630		101 : 100 uH	N : ±30% M : ±20% K : ±10%	T : Taping		Z : Default Code

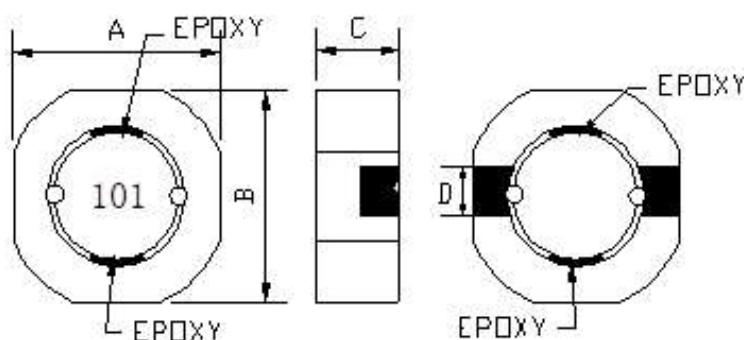
■ Standard Electrical Specifications

Part No.	Inductance	DCR (mΩ)	DCR (mΩ)	Isat (A)
	L (μH)	MAX	TYP	$\Delta L/L_0 \leq 35\%$
ECDH0630F-101M-TWZ	100	545	430	0.34

Notes :

1. Test Frequency : 100KHZ/0.25V
2. Tolerance : N: $\pm 30\%$; M: $\pm 20\%$; K: $\pm 10\%$

■ Dimensions



Note : Using Ink for marking

Unit: mm

Type	A	B	C	D
ECDH0630F	6.8 max.	6.3 max.	3.0 max.	2.5 Ref.

■ Marking

- The inductor is marked with a 3-digit code

Nominal Inductance	
Example	Nominal Value
1R0	1.0 μH
100	10 μH
101	100 μH



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● Reliability test and requirement

Item	Specification and Requirement	Test Method
Resistance to Soldering Heat	1.No visible mechanical damage 2.Inductance change: Within $\pm 5\%$	<p>1.Solder on PCB to Reflow test Peak Temp. $260\pm 5^{\circ}\text{C}$ 5~10 secs ,Cycles:2 times. Re-flowing Profile Please refer to Fig-1.</p> <p>2. Test board thickness: 1.5mm</p> <p>3. Test board material: glass epoxy resin.</p> <p>4. The specimen shall be stored at standard atmospheric conditions for 1hour, after which the measurement shall be made. Product showed no damage under microscope. (for microscope of Shun Yu SZM-45 20X)</p> <p style="text-align: center;">Fig-1</p>
High Temperature	1.No visible mechanical damage 2.Inductance change: Within $\pm 10\%$	<p>1.Temperature: $125\pm 2^{\circ}\text{C}$</p> <p>2.Duration: 1000 hours</p> <p>3.The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made.</p>
Steady damp-heat	1.No visible mechanical damage 2.Inductance change: Within $\pm 10\%$	<p>1.Temperature:85°C</p> <p>2.Humidity: 85% RH</p> <p>3.Duration:1000 hours</p> <p>4.The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made.</p>



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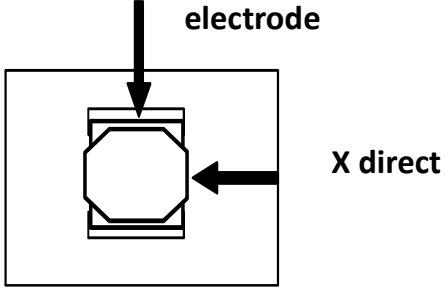
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Item	Specification and Requirement	Test Method
Mechanical Vibration	1.No visible mechanical damage 2.Inductance change: Within $\pm 10\%$	1.Frequency: 10HZ~55HZ~10HZ/Min Cycles. 2.Amplitude: 1.5 mm. 3.Directions: X, Y, Z. 4.Time: 2 hours in each directions (total of 6 hours).
Thermal Shock	1.No visible mechanical damage 2.Inductance change: Within $\pm 10\%$	1.Temperature and time: -40°C for 30 ± 3 min \rightarrow 125°C for 30 ± 3 min, please refer to Fig-2 2.Transforming interval: Max. 3 Min 3.Tested cycle: 1000 cycles 4. The specimen shall be stored at standard atmospheric conditions for 1 hour, after which the measurement shall be made. <p style="text-align: center;">Fig-2</p> <p>The diagram shows a temperature profile with a horizontal dashed line for 'Ambient Temperature'. The cycle consists of: a ramp up to 125°C, a dwell at 125°C for 30 ± 3min, a ramp down to -40°C, a dwell at -40°C for 30 ± 3min, a ramp up to 'Ambient Temperature', a dwell at 'Ambient Temperature' for 30 ± 3min, a ramp down to -40°C, a dwell at -40°C for 30 ± 3min, and a final ramp up to 'Ambient Temperature'. The transition intervals between dwell periods are labeled as 3 Min (max.).</p>
Salt Spray	1.No visible mechanical damage 2.Inductance change: Within $\pm 10\%$	1.Salt concentration: $(5 \pm 1) \%$ (mass percent). 2.pH value:6.5 - 7.2 3.temperature: $35 \pm 2^{\circ}\text{C}$ 4.humidity: 85% 5.time: 24 hours 6.in normal temperature and humidity for 1 ~ 2 hours, testing inductance, the inductance value change can not be more than before test $\pm 10\%$.



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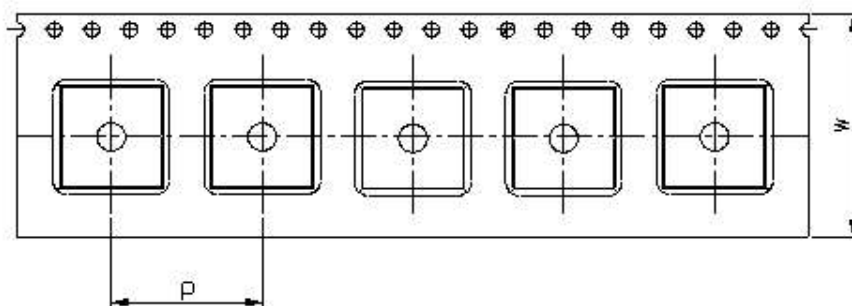
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Item	Specification and Requirement	Test Method
Terminal strength	The peak thrust is greater than 10N	<p>1. The electrode of the inductor is soldered to the PCB, to Fig-3 Then apply a force in the X direction of the arrow.</p> <p>2. 10N force.</p> <p>3. Keep time: 10(±1) s.</p> <p>4. The first test is OK, and the force was applied until the peak value of the product peeling. The test speed was set in the range of 3 ~ 8 mm/min.</p> <p>Fig-3</p> 

Notes : The sample shall be reflow soldered onto the printed circuit board in every test.

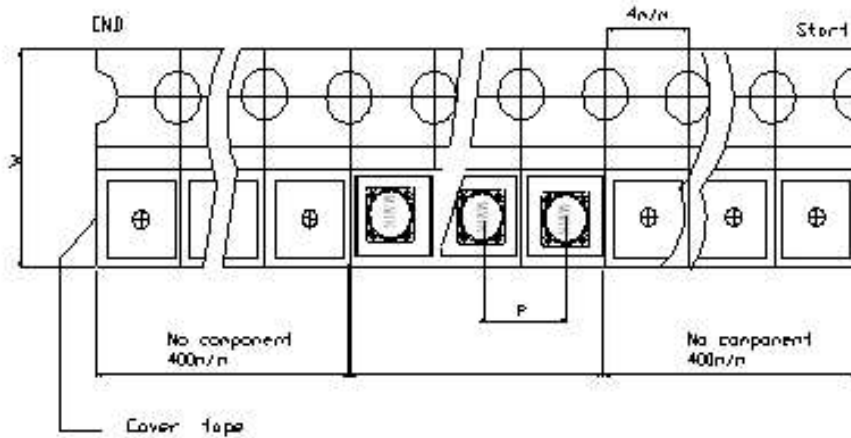
■ Packaging Information

(1) CARRIER TAPE DIMENSIONS (Unit : mm)



W	16
P	12

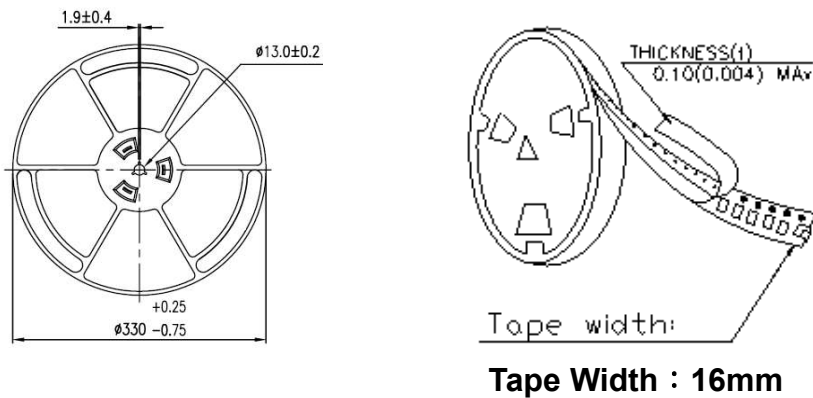
(2) TAPING DIMENSIONS (Unit : mm)



Note:

After the product is ready, the outermost layer of the reel is 400mmMIN and the innermost layer is 400mmMIN.

(3) REEL DIMENSIONS (Unit : mm)



(4) Quantity (PCS)

Type	pcs / Reel
ECDH0630F	1500