

ISO9001 & ISO14001 & TS16949 CHILISIN ELECTRONICS CORP. RoHS & Halogen Free & REACH Compliance.

### SPECIFICATION FOR APPROVAL

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Customor	٠
Customer	٠

Customer P/N:

Drawing No:

Quantity :

Pcs. Date :

Chilisin P/N :

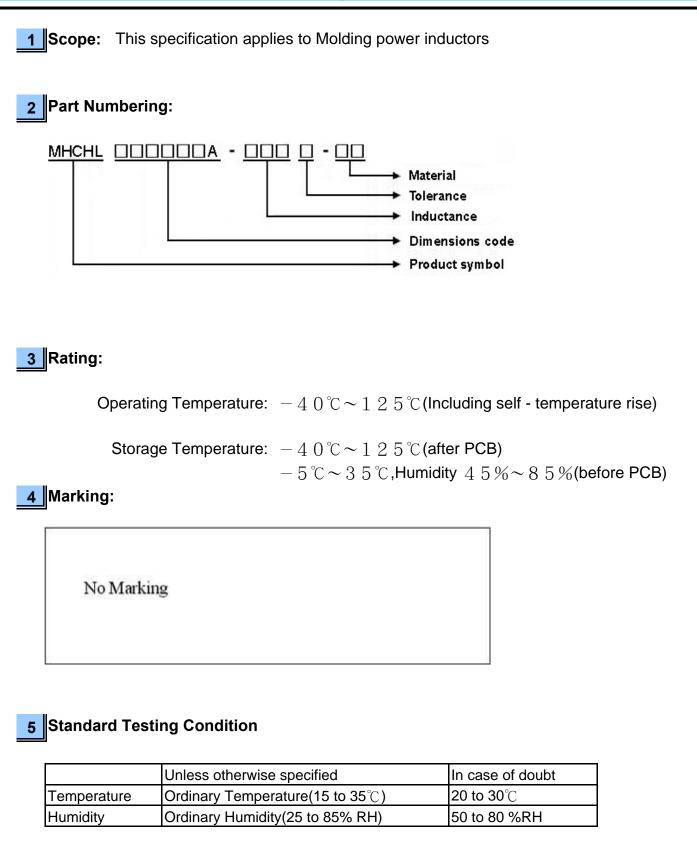
MHCHL201610A-1R0M-Q8

2016/06/06

	SPECIFICATION ACCEPTED BY:	
COMPONENT		
ENGINEER		
ELECTRICAL		
ENGINEER		
MECHANICAL		
ENGINEER		
APPROVED		
REJECTED		
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奇力新電子(河南)有限公 Chilisin Electronics (Henan) Co XiuWu Xian, industry gathering JiaoZuo, Henan China Postal Code:454350 TEL:+86-391-717-0682 FAX:+86-391-717-0666	area SUZHOU QI YIXIN E	Electronics Co., Ltd. Rd., Suzhou New District, 2350
Drawn by 張麗娟 <b>lijuan</b>	Checked by 張瑞滿 <b>rammi</b>	Approved by 鍾瑞民 <b>jacky.chung</b>



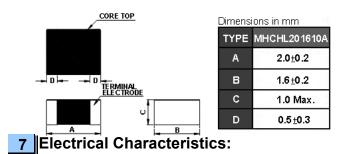
# **MHCHL201610A Series Specification**





## **MHCHL201610A Series Specification**

### 6 Configuration and Dimensions:



Inductance Tolerance Test Freq. Irms(A) Isat(A) RDC(mΩ) SRF Part No. (uH ) (MHz)Typ (±%) Max.(Typ) Max.(Typ) Max.(Typ) MHCHL201610A-R24M-Q8 0.24 20 2MHz,0.2V 3.9(4.8) 5.6(7.0) 27(21) 180 MHCHL201610A-R33M-Q8 0.33 20 2MHz,0.2V 4.7(5.1) 5.3(6.0) 23(17.5) 124 MHCHL201610A-R47M-Q8 20 2MHz,0.2V 3.5(4.2) 42(33) 100 0.47 3.9(4.8) MHCHL201610A-R68M-Q8 0.68 20 2MHz,0.2V 2.7(3.4) 3.2(4.0) 56(43) 73 MHCHL201610A-1R0M-Q8 1 20 2MHz,0.2V 2.5(3.1) 2.9(3.6) 65(53) 67 MHCHL201610A-1R5M-Q8 1.5 20 2MHz,0.2V 2.3(2.7) 2.5(2.8) 85(75) 51 MHCHL201610A-2R2M-Q8 20 2MHz,0.2V 2.2 1.8(2.2) 2.4(2.7) 135(112) 37

NOTE:

1.Operating temperature range  $-4.0\,^\circ\mathrm{C}\,{\sim}\,1.2.5\,^\circ\mathrm{C}$  (Including self - temperature rise)

2.Isat for Inductance drop 30% from its value without current.

3.Irms for a 40  $^\circ\!\mathrm{C}$  temperature rise from 25  $^\circ\!\mathrm{C}$  ambient.

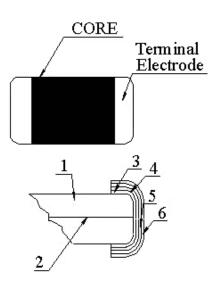
4.All test data is referenced to  $25^\circ\!\mathbb{C}$  ambient

5.Absolute maximum voltage 25VDC



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### 8 MHCHL201610A Series 8.1 Construction:



#### 8.2 Material List:

No	Part	Material
1	Core	Metal Powder
2	Wire	Copper wire
3	Sputter/Plating	Cu
4	Silver Electrode	Ag
5	Plating	Ni
6	Plating	Sn



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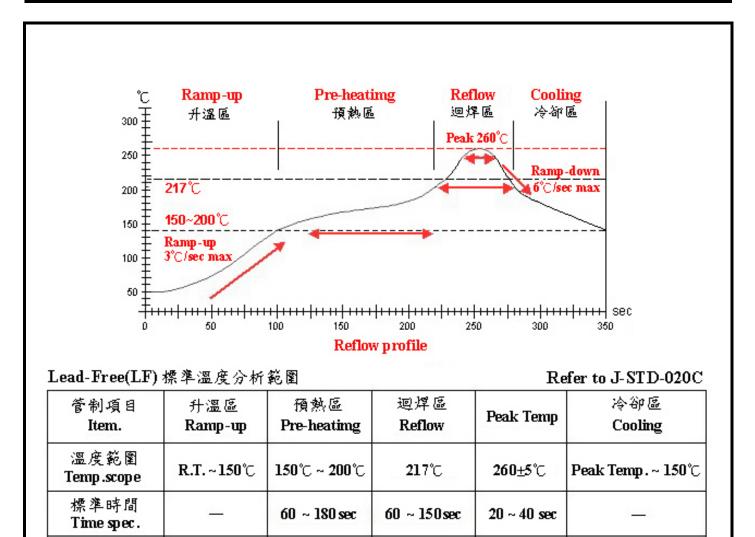
## 9 Reliability Of Molding power inductors

No	Item	Specification	Test Method	
1-1-1	Flexure Strength	The forces applied on the right	Test device shall be soldered on the substrate	
	, , , , , , , , , , , , , , , , , , ,	conditions must not damage	Substrate Dimension: 100x40x1.6mm	
		the terminal electrode and the	Deflection: 2.0mm	
		metal body	Keeping Time: 30sec	
		metal body		
-1-2	Vibration	Appearance:No damage (for	Test device shall be soldered on the substrate	
		microscope of CASTOR MZ-45 20X)	Oscillation Frequency: 10 to 55 to 10Hz for 1 in	
		Inductance change shall be	Amplitude: 1.5mm	
		within ±20%	Time: 2hrs for each axis (X, Y & Z), total 6hrs	
-1-3	Resistance to Soldering Heat		Pre-heating: $150^{\circ}$ C, 1min	
1-1-5	Resistance to boldening riedt	More than 75% of the terminal.		
		electrode should be covered		
			Solder Temperature: 260±5℃	
		with solder.	Immersion Time: 10±1sec	
		Inductance: within ±20% of		
		initial value		
-1-4	Solder ability	The electrodes shall be at	Pre-heating: 150°C, 1min	
		least 95% covered with new	Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free)	
		solder coating	Solder Temperature: 245±5°C	
			Immersion Time: 4±1sec	
-1-5	Terminal Strength Test	No split termination	Test device shall be soldered on the substrate	
	Ç.		then apply a force in the direction of the arrow	
			Force : 5N	
			Keeping Time: 10±1sec	
		Mounting Pad		
-2.E	nvironmental Performanc			
No	ltem	Specification	Test Method	
No		Specification Appearance: No damage	One cycle:	
No	ltem	Specification		
No	ltem	Specification Appearance: No damage	One cycle:	
No	ltem	Specification Appearance: No damage Inductance:within±20% of	One cycle: Step Temperature (°C) Time (m	
No	ltem	Specification Appearance: No damage Inductance:within±20% of	One cycle: Image: Constraint of the system Time (model   Step Temperature (°C) Time (model Time (model   1 -40±3 30 30   2 25±2 3 3	
No	ltem	Specification Appearance: No damage Inductance:within±20% of	One cycle: Image: Temperature (°C) Time (m   1 -40±3 30   2 25±2 3   3 125±3 5	
No	ltem	Specification Appearance: No damage Inductance:within±20% of	One cycle: Temperature (°C) Time (m   1 -40±3 30   2 25±2 3   3 125±3 30   4 25±2 3	
No	ltem	Specification Appearance: No damage Inductance:within±20% of	One cycle: Temperature (°C) Time (m   1 -40±3 30   2 25±2 3   3 125±3 30   4 25±2 3   Total: 100cycles 100cycles 100cycles	
<b>No</b> 1-2-1	Item Temperature Cycle	Specification Appearance: No damage Inductance:within±20% of	One cycle: Temperature (°C) Time (m   1 -40±3 30   2 25±2 3   3 125±3 30   4 25±2 3   Total: 100cycles Measured after exposure in the room condition for 24	
<b>No</b> 1-2-1	ltem	Specification Appearance: No damage Inductance:within±20% of	One cycle:Temperature (°C)Time (m1 $-40\pm3$ 302 $25\pm2$ 33 $125\pm3$ 304 $25\pm2$ 3Total: 100cyclesMeasured after exposure in the room condition for 24Temperature: $60\pm2^{\circ}C$ $125\pm2$	
<b>No</b> 1-2-1	Item Temperature Cycle	Specification Appearance: No damage Inductance:within±20% of	One cycle:StepTemperature ( $^{\circ}C$ )Time (m1-40±330225±233125±330425±243Total: 100cycles3Measured after exposure in the room condition for 24Temperature: $60\pm2^{\circ}C$ Relative Humidity: 90 ~ 95% / Time: 500hrs	
<b>No</b> 1-2-1	Item Temperature Cycle Humidity Resistance	Specification Appearance: No damage Inductance:within±20% of	One cycle:StepTemperature (°C)Time (m1 $-40\pm3$ 302 $25\pm2$ 33 $125\pm3$ 304 $25\pm2$ 3Total: 100cyclesImage: State of the second	
No 1-2-1 1-2-2	Item Temperature Cycle Humidity Resistance High	Specification Appearance: No damage Inductance:within±20% of	One cycle:Temperature ( $^{\circ}C$ )Time (m1-40±330225±233125±330425±23Total: 100cyclesImage: state	
No 1-2-1 1-2-2	Item Temperature Cycle Humidity Resistance	Specification Appearance: No damage Inductance:within±20% of	One cycle:Temperature ( $^{\circ}$ C)Time (m1-40±330225±233125±330425±23Total: 100cyclesMeasured after exposure in the room condition for 24Temperature: $60\pm2^{\circ}$ CRelative Humidity: 90 ~ 95% / Time: 500hrsMeasured after exposure in the room condition for 24Temperature: $85\pm3^{\circ}$ CWRelative Humidity: 0% / Time: 500hrs	
<b>No</b> 1-2-1 1-2-2	Item Temperature Cycle Humidity Resistance High	Specification Appearance: No damage Inductance:within±20% of	One cycle:Temperature ( $^{\circ}C$ )Time (m1-40±330225±233125±330425±23Total: 100cyclesImage: state	
No  -2-1  -2-2	Item Temperature Cycle Humidity Resistance High	Specification Appearance: No damage Inductance:within±20% of	One cycle:Temperature ( $^{\circ}$ C)Time (m1-40±330225±233125±330425±23Total: 100cyclesMeasured after exposure in the room condition for 24Temperature: $60\pm2^{\circ}$ CRelative Humidity: 90 ~ 95% / Time: 500hrsMeasured after exposure in the room condition for 24Temperature: $85\pm3^{\circ}$ CWRelative Humidity: 0% / Time: 500hrs	
No 1-2-1 1-2-2	Item Temperature Cycle Humidity Resistance High Temperature Resistance	Specification Appearance: No damage Inductance:within±20% of	One cycle:Temperature (°C)Time (m1 $-40\pm3$ 302 $25\pm2$ 33 $125\pm3$ 304 $25\pm2$ 3Total: 100cyclesMeasured after exposure in the room condition for 24Temperature: $60\pm2^{\circ}C$ Relative Humidity: $90 \sim 95\%$ / Time: $500hrs$ Measured after exposure in the room condition for 24Temperature: $85\pm3^{\circ}C$ WRelative Humidity: $0\%$ / Time: $500hrs$ Measured after exposure in the room condition for 24Temperature: $85\pm3^{\circ}C$ Relative Humidity: $0\%$ / Time: $500hrs$ Measured after exposure in the room condition for 24	



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Time result

實際時間

NOTE :

1. Re-flow possible times : within 2 times

2. Nitrogen adopted is recommended while in re-flow

 $75 \sim 100 \, \text{sec}$ 

90 ~ 120 sec

20 ~ 35 sec

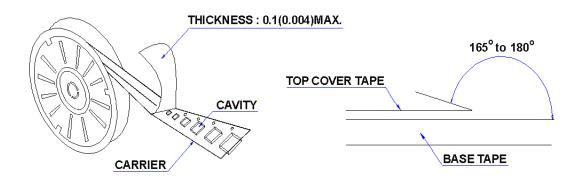


# **MHCHL201610A Series Specification**

### 10 Packaging:

### 10.1 Packaging -Cover Tape

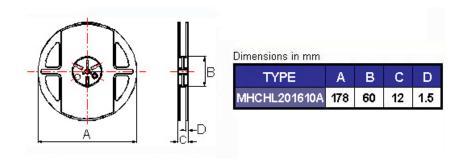
The force for tearing off cover tape is 10 to 100 grams in the arrow direction.



### **10.2 Packaging Quantity**

ТҮРЕ	PCS/REEL
MHCHL201610A	3000

#### **10.3 Reel Dimensions**



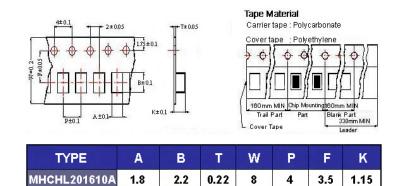


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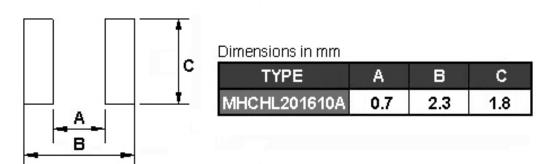
# **MHCHL201610A Series Specification**

### 10 Packaging:

### 10.4 Tape Dimensions in mm



### 11 Recommended Land Pattern:

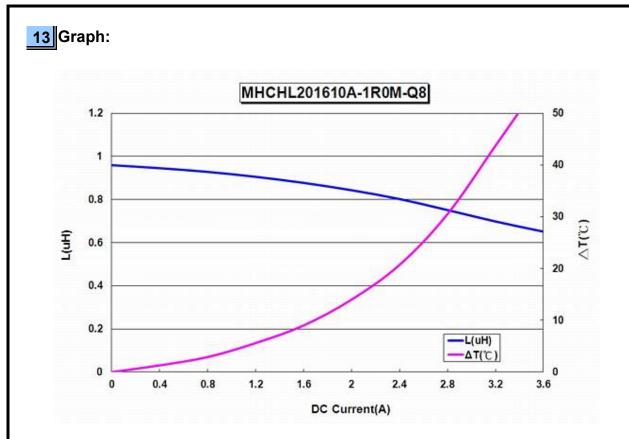


### 12 Note:

- 1. Please make sure that your product has been evaluated and confirmed against your specifications when our product is mounted to your product.
- 2. Do not knock nor drop.
- 3. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
- 4. Please keep the distance between transformer/coil and other components (refer to the standard IEC 950)
- 5.After manufacturing process, there might be slight irregular shape on the edge of the products, and it's a normal phenomenon that can be neglected
- 6. The moisture sensitivity level (MSL) of products is classified as level 1.



# **MHCHL201610A Series Specification**





单击下面可查看定价,库存,交付和生命周期等信息

>>CHILISIN(奇力新)