



ISO9001 ISO14001 IATF16949 CHILISIN ELECTRONICS CORP.

RoHS & Halogen Free & REACH Compliance.

## SPECIFICATION FOR APPROVAL

Customer : 各廠家

Customer P/N: \_\_\_\_\_

Drawing No : \_\_\_\_\_

Quantity : 0 Pcs. Date : 2018/11/13

Chilisin P/N : MHCI04012-R47M-R8

SPECIFICATION ACCEPTED BY:	
COMPONENT ENGINEER	
ELECTRICAL ENGINEER	
MECHANICAL ENGINEER	
APPROVED	
REJECTED	

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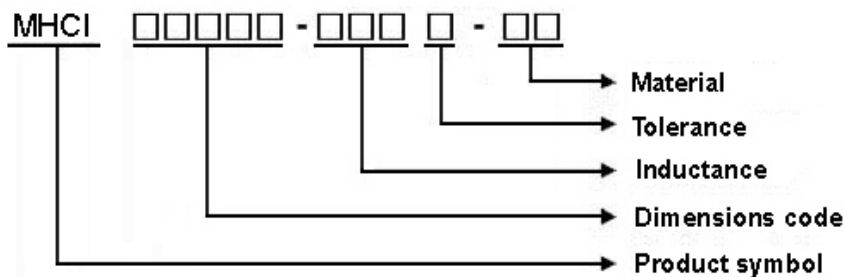
Checked by  
溫美玲 ling

Approved by  
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# MHCI04012 Series Specification

**1 Scope:** This specification applies to large current and low loss SMD shielding power inductor.

**2 Part Numbering:**

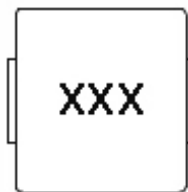


**3 Rating:**

Operating Temperature:  $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$  (Including self - temperature rise)

Storage Temperature: (on tape & reel):  $-20^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$ ; 75% RH max.

**4 Marking:**



**Ex : MHCI04012-1R0M-R8**

**Marking : 1R0**

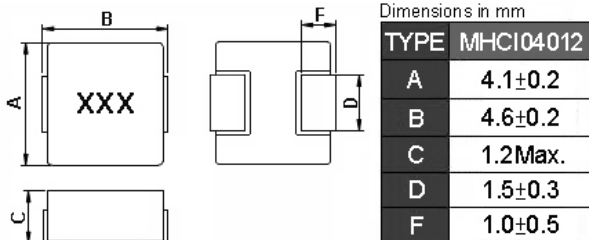
**Marking color : Black**

**5 Standard Testing Condition**

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35°C)	20 to 30°C
Humidity	Ordinary Humidity(25 to 85% RH)	50 to 80 %RH

## MHCI04012 Series Specification

### 6 Configuration and Dimensions:



### 7 Electrical Characteristics:

Part No.	Inductance ( $\mu\text{H}$ )	Tolerance ( $\pm\%$ )	Test Freq.	I <sub>rms</sub> (A) Typ.	I <sub>sat</sub> (A) Typ.	RDC(m $\Omega$ ) Max.	Marking
MHCI04012-R22M-R8	0.22	20	100kHz,0.5V	8.5	11.5	12(11typ)	R22
MHCI04012-R33M-R8	0.33	20	100kHz,0.5V	6.5	8.5	19(17typ)	R33
MHCI04012-R47M-R8	0.47	20	100kHz,0.5V	5	7	25(20typ)	R47
MHCI04012-R68M-R8	0.68	20	100kHz,0.5V	4.5	6	36(32typ)	R68
MHCI04012-1R0M-R8	1	20	100kHz,0.5V	4.2	5.2	47(43typ)	1R0
MHCI04012-1R5M-R8	1.5	20	100kHz,0.5V	3.25	4	75(68yp)	1R5
MHCI04012-2R2M-R8	2.2	20	100kHz,0.5V	2.75	3.5	83.5(79.4typ)	2R2
MHCI04012-3R3M-R8	3.3	20	100kHz,0.5V	2	3	165(150yp)	3R3
MHCI04012-4R7M-R8	4.7	20	100kHz,0.5V	1.8	2.8	195(175yp)	4R7

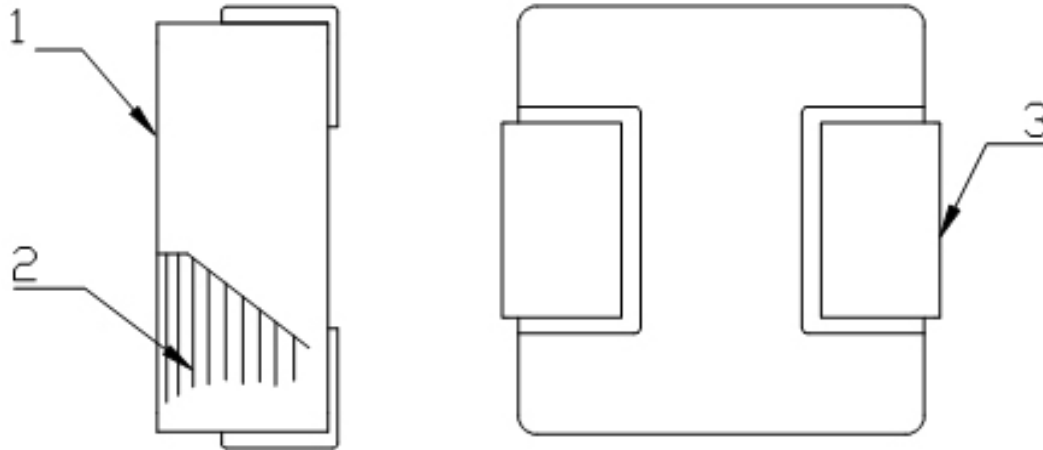
**Note:**

1. Operating temperature range -55°C~125°C (Including self - temperature rise)
2. I<sub>sat</sub> for Inductance drop 30% from its value without current.
3. I<sub>rms</sub> for a 40°C temperature rise from 25°C ambient.
4. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.  
Circuit design 125°C under worst case operating conditions. Component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
5. Absolute maximum voltage 30VDC

## MHCI04012 Series Specification

### 8 MHCI04012 Series

#### 8.1 Construction:



#### 8.2 Material List:

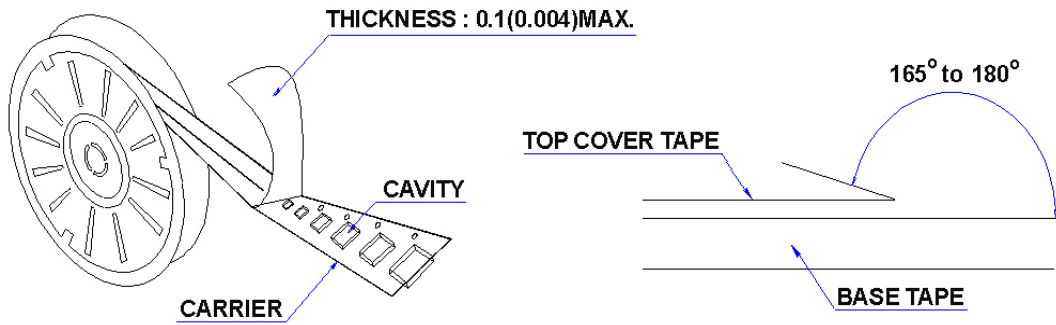
No	Part	Material
1	CORE	Alloy powder
2	WIRE	Copper wire
3	TERMINAL	TERMINAL COPPER

# MHCI04012 Series Specification

## 9 Packaging:

### 9.1 Packaging -Cover Tape

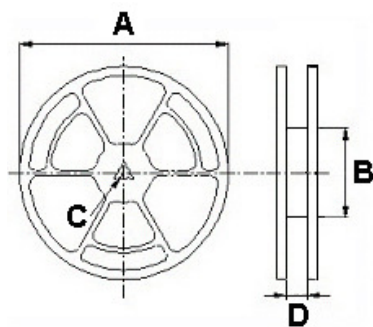
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



### 9.2 Packaging Quantity

TYPE	PCS/REEL
MHCI04012	2000

### 9.3 Reel Dimensions



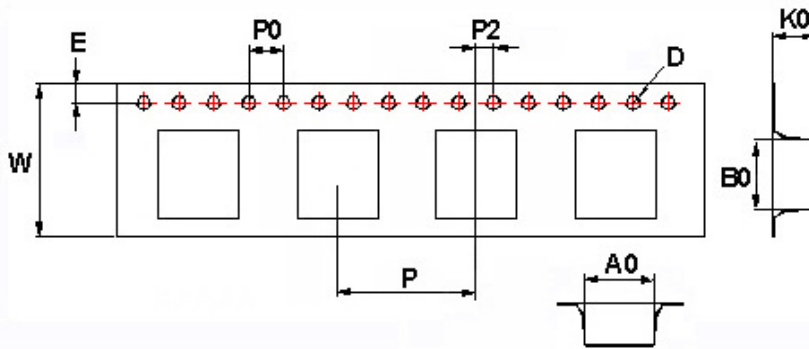
Dimensions in mm

TYPE	A	B	C	D
MHCI04012	330	100	13	13.4

# MHCI04012 Series Specification

## 9 Packaging:

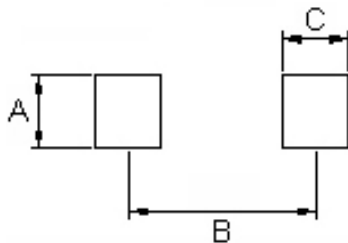
### 9.4 Tape Dimensions in mm



TYPE	A0	B0	K0	D	E	W	P	P0	P2
MHCI04012	4.3	4.9	1.5	1.55	1.75	12	8	4	2

## 10 Recommended Land Pattern:

PAD LAYOUT



Dimensions in mm

TYPE	A(in/mm)	B(in/mm)	C(in/mm)
MHCI04012	0.098/2.5	0.146/3.7	0.059/1.5

## 11 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. The moisture sensitivity level (MSL) of products is classified as level 1.



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12 Graph: MHCI04012-R47M-R8

