RoHS & Halogen Free & REACH Compliance.

SPECIFICATION FOR APPROVAL

Customer：

Customer P/N:

Drawing No：　　　　C3X2301458

Quantity：　**X**　Pcs.　**Date :**　　**2023/11/16**

P/N：　　　**MHCI04012-R60M-R8L**

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

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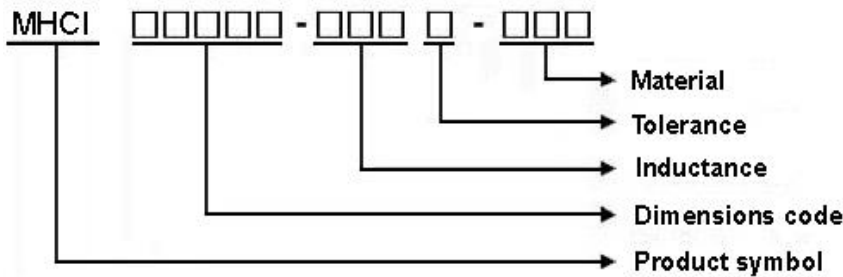419601, China
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Drawn by	Checked by	Approved by
Ryan Tsai	**Wayne Wu**	**Mark Chung**

REVISIONS

REV.	Description	Date	APPROVED BY	CHECKED	DRAWN BY
A	Initial release	2023/11/16	Mark Chung	Wayne Wu	Ryan Tsai

MHCI04012 Series Specification

1 **Scope:** This specification applies to Large current and Low Loss SMD Power INDUCTOR
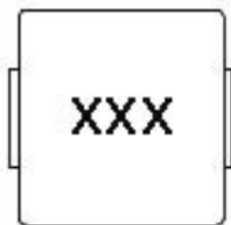
2 **Part Numbering:**


```
MHCI  □□□□□ - □□□ □ - □□□
                              → Material
                              → Tolerance
                              → Inductance
                              → Dimensions code
                              → Product symbol
```

3 **Rating:**

Operating Temperature: - 55°C ~ 125°C

Storage Temperature: (on tape & reel): -20°C to +40°C; 75% RH max.
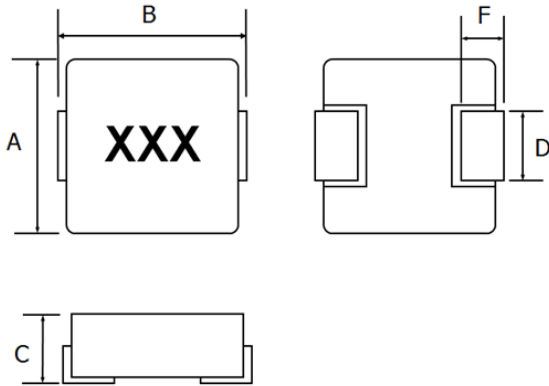
4 **Marking:**

XXX

Marking : R60

Marking color : Black

5 **Standard Testing Condition**

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

6 Configuration and Dimensions:

Dimensions in mm

TYPE	MHCI04012
A	4.1 ± 0.2
B	4.6 ± 0.2
C	1.0 ± 0.2
D	1.5 ± 0.3
F	1.0 ± 0.5

7 Electrical Characteristics:

| Part No.	Inductance (uH)	Tolerance (±%)	Test Freq.	Irms(A) Max(Typ)	Isat(A) Max(Typ)	RDC(mΩ) Max(Typ)	Marking
MHCI04012-R60M-R8L	0.6	20	100kHz,0.5V	6.5(7.0)	6.5(7.0)	18.0(16.5)	R60

Note:

1. Operating temperature range -55℃~125℃

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

3. Irms for a 40℃ temperature rise from 25℃ 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 (Based on test method, it may not the sameunder different application,
   it is recommended to verify first.)

8 **MHCI04012 Series**

8.1 Construction:
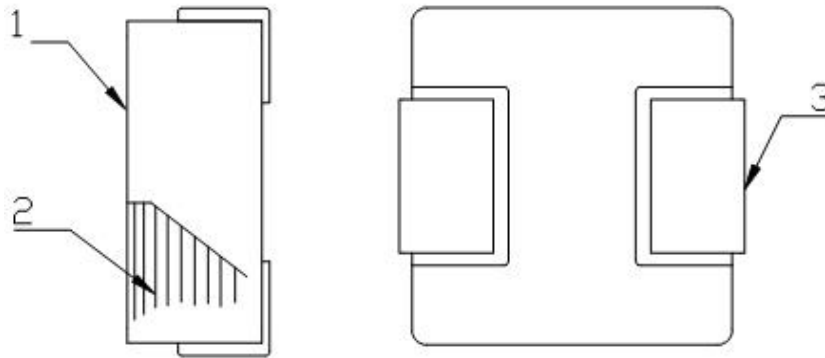
8.2 Material List:

ITEM	PART	DESCRIPTION
1	CORE	Magnetic Metal Powder
2	WIRE	Copper wire
3	TERMINAL	TERMINAL COPPER

MHCI04012 Series Specification

9 PACKAGING

9.1 Packaging -Cover tape
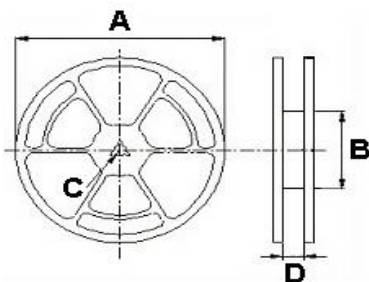
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.
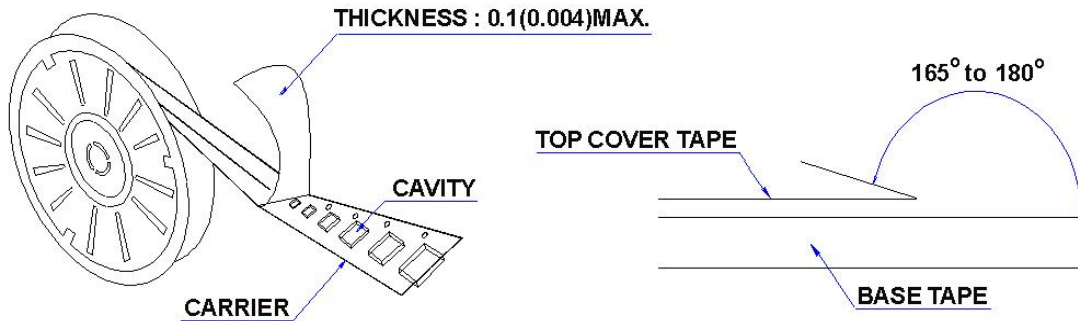
9.2 Packaging Quantity

TYPE	PCS/REEL
MHCI04012	2000

9.3 Reel Dimensions

Dimensions in mm

TYPE	A	B	C	D
MHCI04012	330	100	13	13.4

9 PACKAGING

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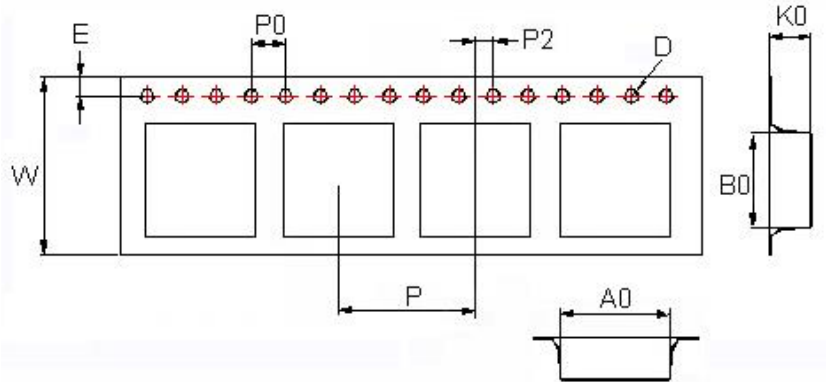
TYPE	A0	B0	K0	D	E	W	P	P0	P2
MHCI04012	4.3	4.9	1.5	1.55	1.75	12	8	4	2

10 Recommended Pattern

PAD LAYOUT
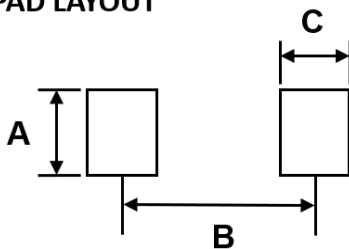
Dimensions in mm

TYPE	A(mm)	B(mm)	C(mm)
MHCI04012	2.5	3.7	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.

12 Graph: