



ISO9001 & ISO14001 & TS16949 **CHILISIN ELECTRONICS CORP.**

RoHS & Halogen Free & REACH Compliance.

SPECIFICATION FOR APPROVAL

Customer : _____

Customer P/N: _____

Drawing No : _____

Quantity : **0** **Pcs.** **Date :** **2015/03/02**

Chilisin P/N : **MHCH201610A-SERIES**

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

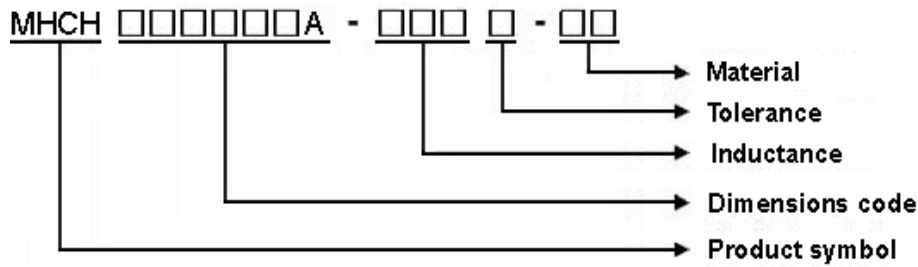
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Drawn by 陳瑞揚 ryan.chen	Checked by 邱明傑 Joseph.Chiu	Approved by 陳瑞揚 ryan.chen
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MHCH201610A Series Specification

1 Scope: This specification applies to Molding power inductors

2 Part Numbering:



3 Rating:

Operating Temperature: $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$ (Including self - temperature rise)

Storage Temperature: $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$ (after PCB)

$-5^{\circ}\text{C} \sim 35^{\circ}\text{C}$, Humidity 45%~85% (before PCB)

4 Marking:

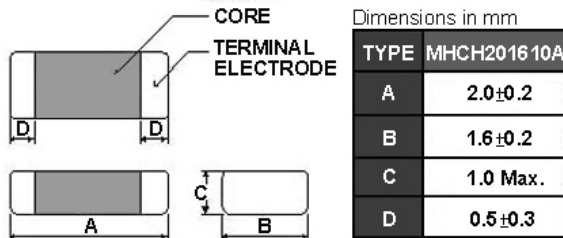
No Marking

5 Standard Testing Condition

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35°C)	20±2°C
Humidity	Ordinary Humidity(25 to 85% RH)	60 to 70 % RH

MHCH201610A Series Specification

6 Configuration and Dimensions:



7 Electrical Characteristics:

Part No.	Inductance (uH)	Test Freq.	I _{rms} (A) Max.(Typ)	I _{sat} (A) Max.(Typ)	RDC(mΩ) Max.(Typ)	Tolerance (±%)
MHCH201610A-R24M-Q8	0.24	2MHz,0.2V	3.9(4.8)	5.6(7.0)	27(21)	20
MHCH201610A-R33M-Q8	0.33	2MHz,0.2V	4.7(5.1)	5.3(6.0)	23(17.5)	20
MHCH201610A-R47M-Q8	0.47	2MHz,0.2V	3.5(4.2)	3.9(4.8)	42(33)	20
MHCH201610A-R68M-Q8	0.68	2MHz,0.2V	2.7(3.4)	3.2(4.0)	56(43)	20
MHCH201610A-1R0M-Q8	1	2MHz,0.2V	2.5(3.1)	2.9(3.6)	65(53)	20
MHCH201610A-1R5M-Q8	1.5	2MHz,0.2V	2.3(2.7)	2.5(2.8)	85(75)	20
MHCH201610A-2R2M-Q8	2.2	2MHz,0.2V	1.8(2.2)	2.4(2.7)	135(112)	20

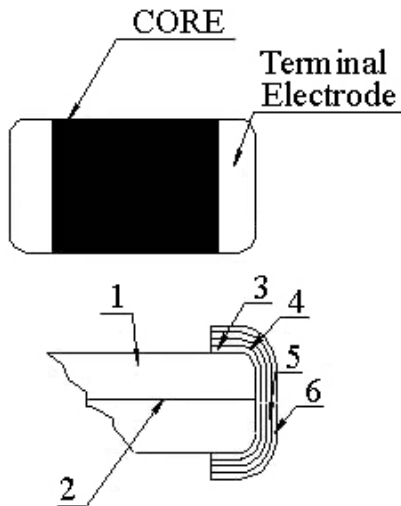
NOTE:

1. Operating temperature range — 4 0 °C ~ 1 2 5 °C (Including self - temperature rise)
2. I_{sat} for Inductance drop 30% from its value without current.
3. I_{rms} for a 40°C temperature rise from 25°C ambient.
4. All test data is referenced to 25°C ambient

MHCH201610A Series Specification

8 MHCH201610A Series

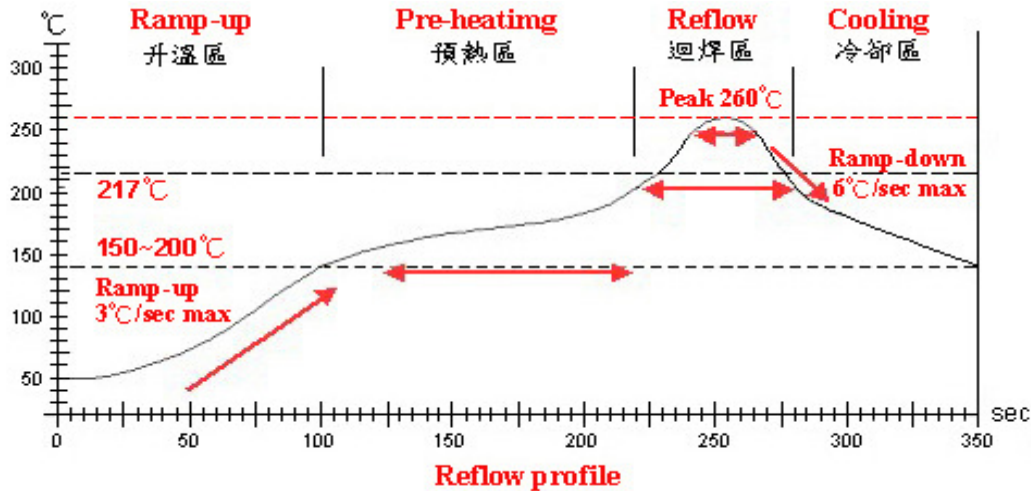
8.1 Construction:



8.2 Material List:

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

MHCH252010A Series Specification



Lead-Free(LF) 標準溫度分析範圍

Refer to J-STD-020C

管制項目 Item.	升温區 Ramp-up	預熱區 Pre-heating	迴焊區 Reflow	Peak Temp	冷卻區 Cooling
溫度範圍 Temp. scope	R.T. ~ 150°C	150°C ~ 200°C	217°C	260±5°C	Peak Temp. ~ 150°C
標準時間 Time spec.	—	60 ~ 180 sec	60 ~ 150sec	20 ~ 40 sec	—
實際時間 Time result	—	75 ~ 100 sec	90 ~ 120sec	20 ~ 35 sec	—

NOTE :

1. Re-flow possible times : within 2 times
2. Nitrogen adopted is recommended while in re-flow



MHCH201610A Series Specification

10 Test Data for Pre-production Samples

Chilisin P/N: MHCH201610A-1R0M-Q8											
Measured Item	L0 (uH)	L1 (uH)Max.	RDC (mΩ)Max.	A m/m	B m/m	C m/m	D m/m				
Spec	Customer	1±20%									
	Suggest		L0*0.7	65(53typ)	2.0±0.2	1.6±0.2	1.0 Max.	0.5±0.3			
Test Freq.	Isat=0A 2MHz 0.2V	Isat=2.9A 2MHz 0.2V									
1	0.95	0.759	49.1	2.12	1.75	0.96	0.46				
2	0.901	0.718	49.7	2.12	1.74	0.98	0.48				
3	0.937	0.733	48.8	2.12	1.75	0.96	0.48				
4	0.935	0.731	49.5	2.12	1.75	0.98	0.5				
5	0.959	0.738	49.4	2.12	1.74	0.94	0.46				
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
\bar{X}	0.9364	0.7358	49.3	2.12	1.746	0.964	0.476				
R	0.058	0.041	0.9	0	0.01	0.04	0.04				
Customer											
Sample											

Test Instrument

L : Agilent E4991A/HP4287A+16197A
 RDC : CHEN HWA 502BC / HP4338B
 Isat : Agilent E4980A+HP42841A
 Irms : Agilent 6641 SYSTEM DC POWER SUPPLY

Appearance and Dimensions:

SPEC : Refer to Item 6
 Test Method : Visual Inspection and Measured with Slide Calipers.

Test Conditions:

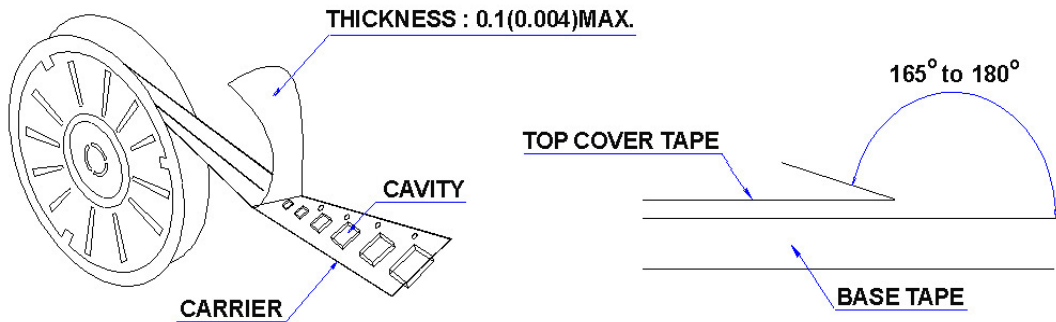
	Unless Otherwise Specified	In Case of Doubt
Temperature	Ordinary Temperature (15 to 35°C)	20 ± 2 °C
Humidity	Ordinary Humidity (25 to 85 %RH)	60 to 70 %RH

MHCH201610A Series Specification

11 Packaging:

11.1 Packaging -Cover Tape

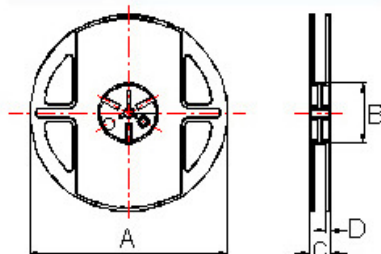
The force for tearing off cover tape is 10 to 100 grams in the arrow direction.



11.2 Packaging Quantity

TYPE	BULK	PCS/REEL
MHCH201610A	✓	3000

11.3 Reel Dimensions



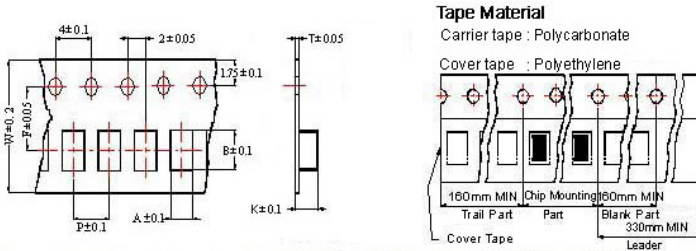
Dimensions in mm

TYPE	A	B	C	D
MHCH201610A	178	60	12	1.5

MHCH201610A Series Specification

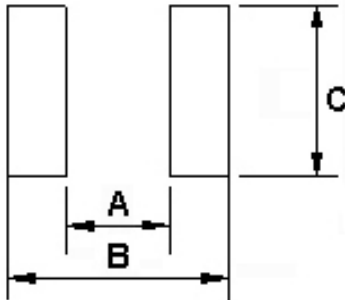
11 Packaging:

11.4 Tape Dimensions in mm



TYPE	A	B	T	W	P	F	K
MHCH201610A	1.8	2.2	0.22	8	4	3.5	1.15

12 Recommended Land Pattern:



Dimensions in mm

TYPE	A	B	C
MHCH201610A	0.9	2.0	1.6

13 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 neglectable.

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