

APPROVAL SHEET

(RoHS Compliant & Halogen Free)

CUSTOMER : Foxconn
CUSTOMER'S PART NO :
DESCRIPTION :
PART NO. : MCU-201212H-900-E1
DATE : 2018/11/16
AUTHORIZED BY : **ALFA**

	FULLY APPROVED	PARTIALLY APPROVED	REJECTED
SIGN			
SUGGESTION			

美磊科技股份有限公司

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REVISIONS

[illegible]

I . SCOPE :

This specification applies to the Pb Free Common mode filters
for MCU-201212H-SERIES-□□

PRODUCT IDENTIFICATION

MCU- 201212 H - 900 -□□

① ② ③ ④ ⑤

- ① Product Code
- ② Dimensions Code
- ③ HDMI Type
- ④ Impedance Code
- ⑤ Inner Control Code

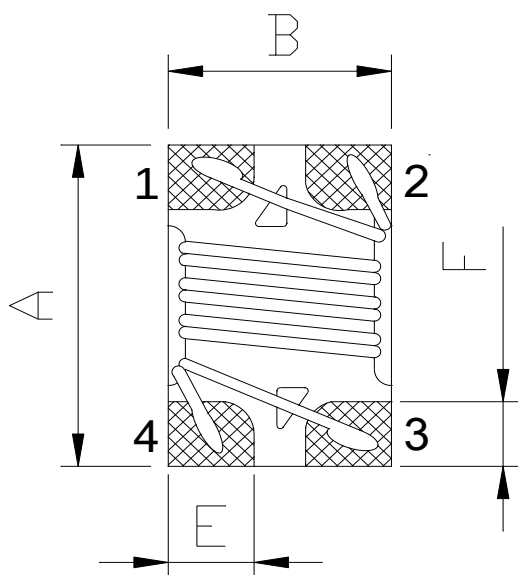
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8.STANDARD TEST CONDITIONS Unless otherwise specified, test condition should be Temp.=20±5℃, Humidity=35~85% But if needed, then test condition should be Temp.=20±2℃, Humidity=65±5% 9.SHELF LIFE Storage Condition:The temperature should be within-40℃ ~105℃ and humidity should be less than 75%RH. The product should be used within 12 months from the time of delivery. In addition, suggest to use product within 6 months from the time of delivery.		

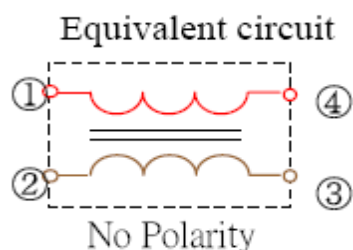


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(1) SHAPES AND DIMENSIONS



A:	2.05 ± 0.20	mm
B:	1.25 ± 0.20	mm
C:	1.20 ± 0.20	mm
E:	0.50 Typ.	mm
F:	0.40 Typ.	mm



(2) ELECTRICAL SPECIFICATIONS

SEE TABLE 1

TEST INSTRUMENTS

Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)

RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)

I.R : CHROMA MODEL 19073 AC/DC/IR HIPOT TESTER (or equivalent)

(3) CHARACTERISTICS

(3)-1 Operate temperature range $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

(Including self temp. rise)

(3)-2 Storage temperature range $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$



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TABLE 1

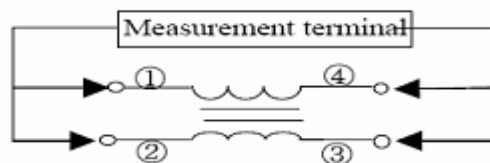
MAGLAYERS PT/NO.	Z(Ω) Impedance @100MHz	RDC (Ω) max. (1 line)	Rated Voltage Vdc(V)	Idc Max.(mA)	Withstand Voltage (V)	Insulation Resistance (MΩ)Min.
MCU-201212H-500-□□	50±25%	0.20	50	500	125	10
MCU-201212H-670-□□	67±25%	0.30	50	500	125	10
MCU-201212H-900-□□	90±25%	0.30	50	500	125	10
MCU-201212H-121-□□	120±25%	0.35	50	330	125	10

* IDC:Based on temperature rise($\Delta T=20^{\circ}\text{C}$ Typ.)

TEST EQUIPMENT

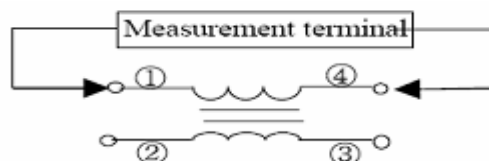
1. Impedance

Measured by using HP 4291B IMPEDANCE ANALYZER



2. DC Resistance

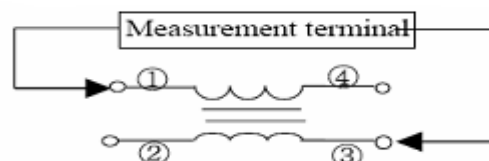
Measured by using Chroma 16502 mill ohm meter



3. Insulation Resistance

Measured by using Chroma 19073

Measurement voltage: 50v, 3S



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(4) RELIABILITY TEST METHOD

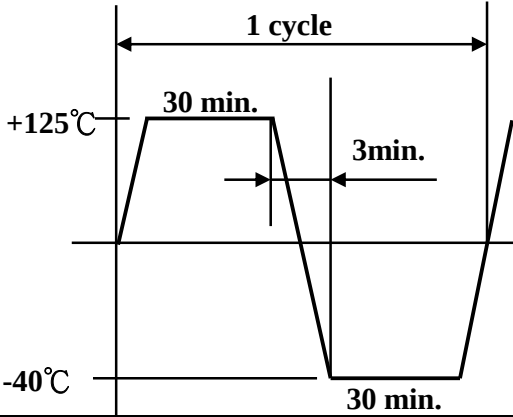
Mechanical

Item	Specifications	Test conditions
Resistance To Soldering Heat	Appearance: No Damage	1. The device should be reflow soldered on PCB (peak $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 10 seconds) 2. Solder Composition: Sn/Ag3.0/Cu0.5 3. Test time: 6 minutes
Solder ability	The electrodes shall be at least 90% covered with new solder coating	Pre-heating: 150°C , 1min Solder Composition: Sn/Ag3.0/Cu0.5(Pb-Free) Solder Temperature: $245 \pm 5^{\circ}\text{C}$ (Pb-Free) Immersion Time: $4 \pm 1\text{sec}$
Component Adhesion (Push Test)	1 Lbs. For 1210 Size 2 Lbs. For other	The device should be reflow soldered ($245 \pm 5^{\circ}\text{C}$ For 10 seconds) to a tinned copper substrate. A force gauge should be applied to the side of the component. The device must withstand a minimum force of 2 pounds without a failure of the termination attached to component



(4) RELIABILITY TEST METHOD

Environmental

Item	Specifications	Test conditions
High temperature Load Life	There should be no evidence of short or open circle	Temperature: $85\pm 3^{\circ}\text{C}$ Load: Allowed DC Current Testing time : 500 hours
Humidity Load Life		Temperature : $-40\pm 2^{\circ}\text{C}$ Relative Humidity: 90~95% Testing time : 500 hours
High temperature resistance	Appearance : Ferrite shall not be damaged. Impedance: Within $\pm 20\%$ of the initial value. insulation resistance: $>10(\text{M}\Omega)$ DC resistance : standard value inside.	Temperature : $+85\pm 3^{\circ}\text{C}$ Testing time : 50 hours Measurement : After placing for 24 hours min.
Humidity resistance		Temperature : $+40\pm 2^{\circ}\text{C}$ Humidity : 90 to 95%RH Testing time : 100 hours Measurement : After placing for 24 hours min.
Thermal shock		Temperature : $-40^{\circ}\text{C}, +125^{\circ}\text{C}$ kept stabilized for 30 minutes each. Cycle : 5 cycle Measurement : After placing for 24 hours min. 
Low temperature resistance		Temperature : $-40\pm 2^{\circ}\text{C}$ Testing time : 50 hours Measurement : After placing for 24 hours min.
Vibration	Appearance : Ferrite shall not be damaged.	Frequency : 10 to 50 Hz Amplitude : 1.52 mm Dimension and times : X, Y and Z directions for 2 hours each.

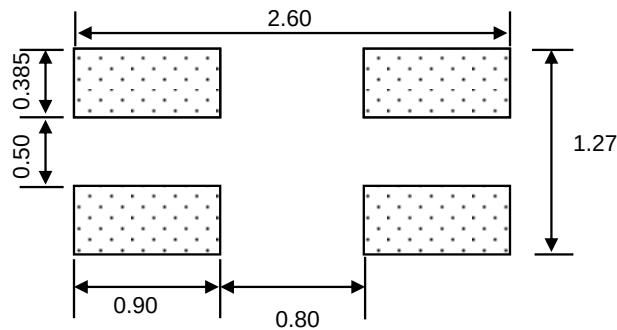


(5) RECOMMENDED SOLDERING CONDITIONS

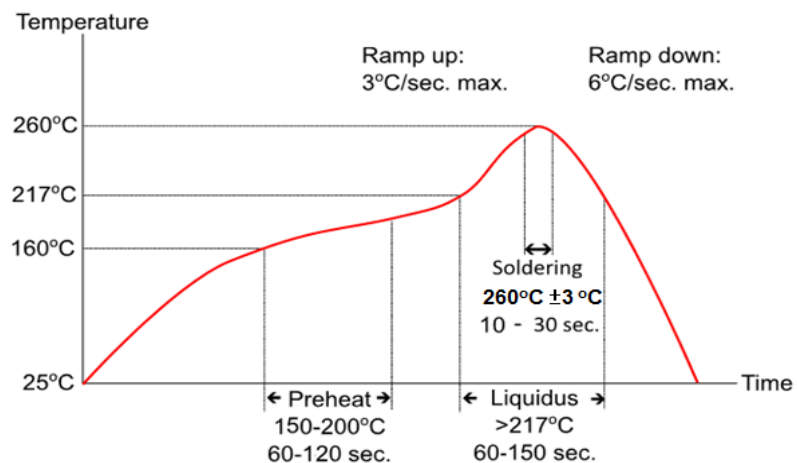
(Please use this product by reflow soldering)

(5)-1 RECOMMENDED FOOTPRINT

Unit: mm



(5)-2 RECOMMENDED REFLOW PATTERN



(5)-3 IRON SOLDERING

Use a solder iron of less than 30W when soldering ,do not allow the soldering iron tip directly touch the Ceramic body outside of terminal electrode.

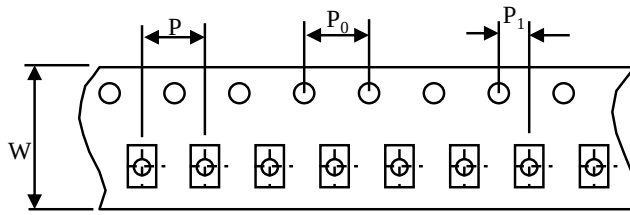
3 seconds max. at 260°C.



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(6) PACKAGING

(6)-1 CARRIER TAPE DIMENSIONS (mm)



W : 8.0 mm

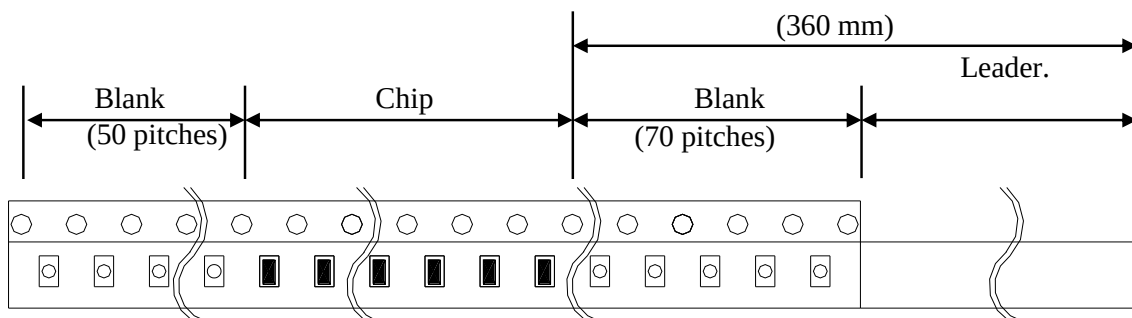
P : 4.0 mm

P0 : 4.0 mm

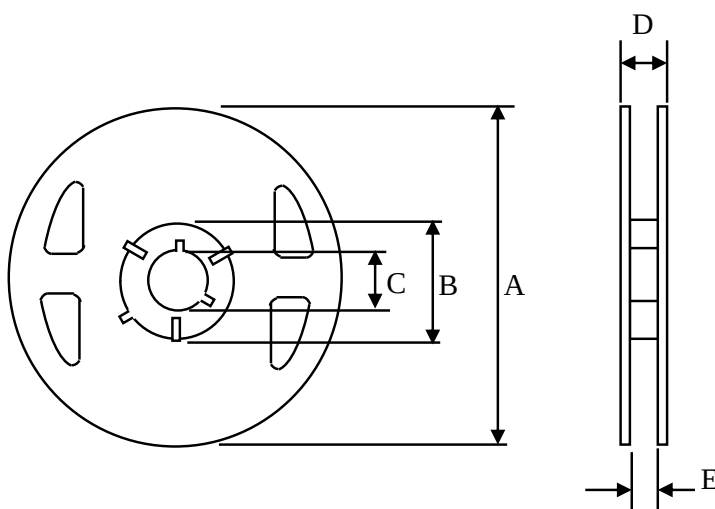
P1 : 2.0 mm

(6)-2 TAPING DIMENSIONS (mm)

There shall not continuation more than two vacancies of the product.



(6)-3 REEL DIMENSIONS



A : 178 mm

B : 60 mm

C : 13 mm

D : 12 mm

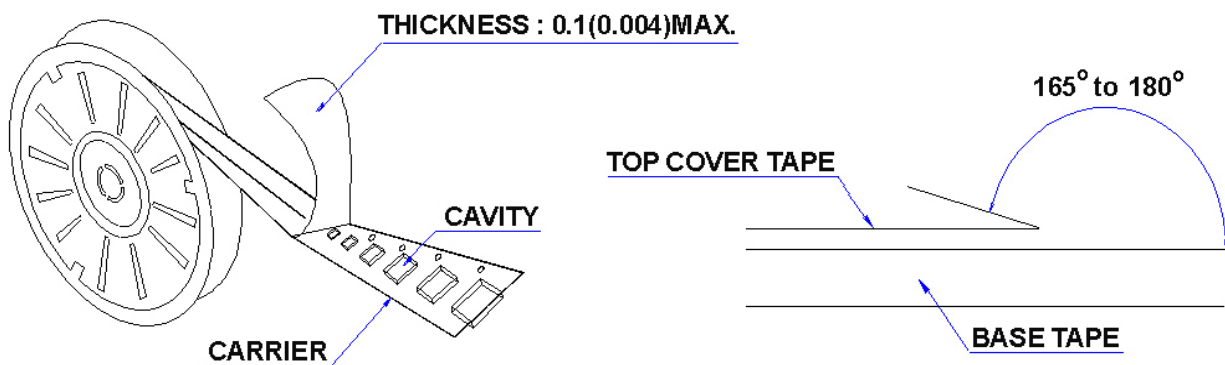
E : 8.4 mm



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(6)-4 COVER TAPE PEEL STRENGTH

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



(6)-5 QUANTITY

2000 pcs/Reel

(6)-6 The products are packaged so that no damage will be sustained.

(7) ATTENTION IN CASE OF USING

In case of using product ,please avoid following matters:

Splashing water or salt water

Dew condenses

Toxic gas (Hydrogen sulfide, Sulfurous acid ,Chlorine, Ammonia)

Vibrations or shocks which exceed the specified condition

Please be careful for the stress to this product by board flexure or something after the mounting.



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TYPICAL ELECTRICAL CHARACTERISTICS

