

# SPECIFICATION FOR APPROVAL

CUSTOMER	_____
CUST. PART NO.	_____
CUST. DOC. REV.	_____
DESCRIPTION	<u>HIGH CURRENT POWER CHOKE(ROHS+H.F)</u>
SAMPLE LOT NO.	_____
PART NO.	<u>MCS0412-XXXMN1</u>
DOC. REV.	<u>ORIG</u>
DATE	_____

Once you approve this part, please sign and return this page to the following marked location.

**Customer Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

This part currently development section.

Production line can produce this series of products.

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TESTED BY	CHECKED BY	APPROVED BY

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# SPECIFICATION FOR APPROVAL

<b>CUSTOMER</b>	<b>CUSTOMER P/N</b>	<b>REV.</b> —	<b>SPL. LOT NO.</b>	
<b>PART NAME</b> HIGH CURRENT POWER CHOKE(ROHS+H.F)	<b>PART NO.</b> MCS0412-XXXMN1	<b>REV.</b> ORIG	<b>DATE OF ISSUE</b>	<b>Q'TY</b> 0 PCS

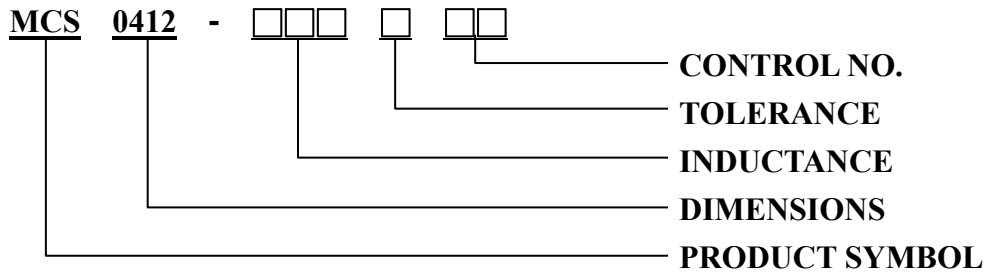
## ENGINEERING CHANGE NOTICE - RECORD

<b>REVISION NO.</b>	<b>REVISION DESCRIPTION</b>	<b>AUTHOR</b>	<b>DATE</b>	<b>REMARK</b>
<b>ORIG</b>		<i>Gary Chang</i>		

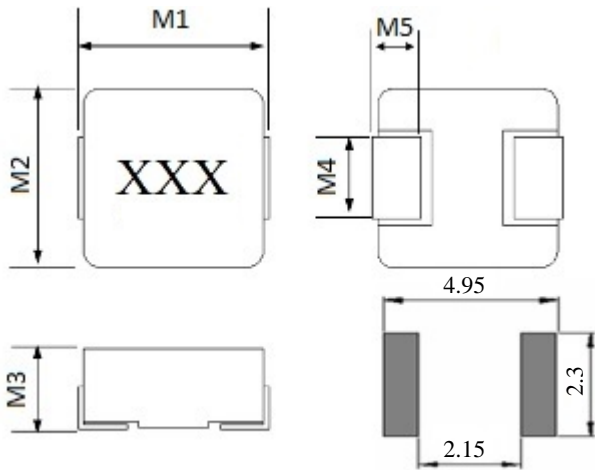
# SPECIFICATION FOR APPROVAL

※This is a RoHS and REACH compliant product whose related documents are available on request.  
 ※Graphic is only for dimensionally application.

## 1. PRODUCT IDENTIFICATION



## 2. PRODUCT DIMENSION



UNIT: mm

	DIM.	TOL.
<b>M1</b>	<b>4.4</b>	<b>±0.35</b>
<b>M2</b>	<b>4.2</b>	<b>±0.25</b>
<b>M3</b>	<b>1.2</b>	<b>MAX.</b>
<b>M4</b>	<b>1.5</b>	<b>±0.3</b>
<b>M5</b>	<b>0.8</b>	<b>±0.3</b>

## 3. MARKING

Marking ex:1.0uH → 1R0



# SPECIFICATION FOR APPROVAL

## 4. ELECTRICAL SPEC.

PART NO.	Inductance (uH) ±20%	DCR (mΩ) Typical	DCR (mΩ) MAX.	Idc (A) Typical	I sat (A) Typical
MCS0412-R68MN1	0.68	32.0	36.0	4.7	6.0
MCS0412-1R0MN1	1.0	43.0	47.0	4.5	5.5

TEST INSTRUMENT: Zentech-3305 / Zentech502BC

- (1) Test Freq : 100KHz , 1.0V
- (2) All test Data is referenced to 25°C ambient.
- (3) Typical Heat Rating DC Current would cause an approximately  $\Delta T$  of 40°C.
- (4) Typical Saturation DC Current would cause  $L_o$  to drop approximately 30%.
- (5) Operation Temperature Range : -55°C ~ 125°C.
- (6) The Part temperature (ambient + $\Delta T$ ) should not exceed 125°C under worst case operating conditions.
- (7) Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all effect the part temperature. Part temperature should be verified in the end application.

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## 5. RELIABILITY PERFORMANCE

### Reliability Experiment For Electrical

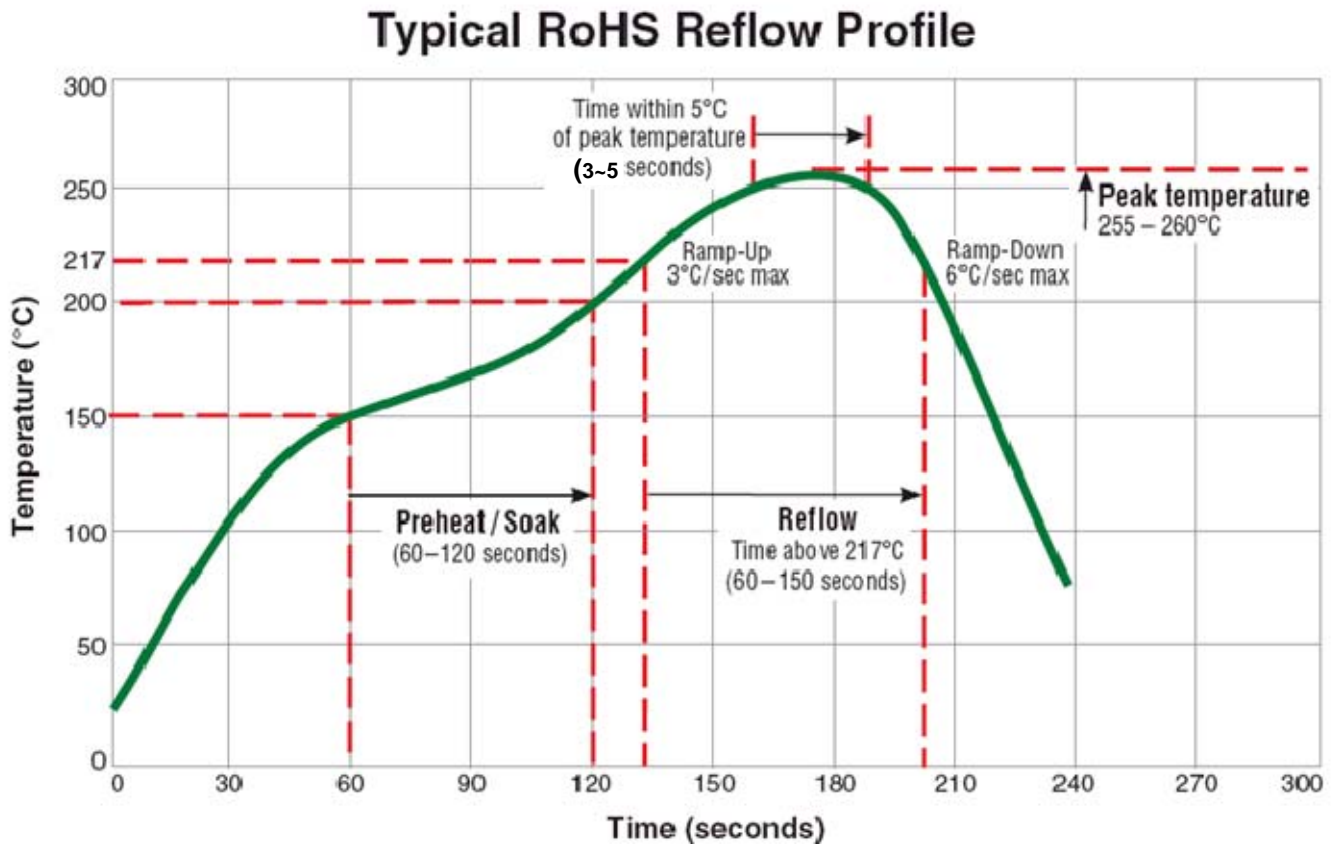
Test Item	Test Condition	Standard Source
Humidity Test	+40°C±2°C, humidity of 90%±5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
High Temperature Test	1.Temperature: +125°C±2°C. 2.Test time: 48±2hrs.	IEC 68-2 Test Condition B
Low Temperature Test	1.Temperature: -40°C±2°C. 2.Test time: 48±2hrs.	IEC 68-2 Test Condition A
Thermal Shock	+125°C±5°C (30 minutes) ~ -40±5°C (30 minutes), temperature switch time: 5 minutes (total 50 cycles) Wind speeds 10m/sec.	Reference MIL-STD-202G Method 107G Test Condition B-2
Life Test	+70°C±5°C (300Hours).	Reference MIL-STD-202G Method 108A Test Condition B

### Reliability Experiment For Physical

Test Item	Test Condition	Standard Source
Vibration Test	10-55-10HZ, amplitude: 1.5mm, direction: X, Y, Z axes, each axis 2 hours (total 6 hours).	MIL-STD-202G Method 201A
Solder Heat Resistance Test	IR/convection reflow: Peak Temp 255°C~260°C for 3~5 Sec. in air, Through 2 Cycle. Temperature Ramp:+1~4°C/sec.; Above 217°C, must keep 90 s - 120 s.	Reference MIL-STD-202G Method 210F Test Condition K (Reflow)
Solder Ability Test	Soak in 245°C solder pot of 3~5 Sec., PAD must have 95% above coverage.	Reference J-STD-002D

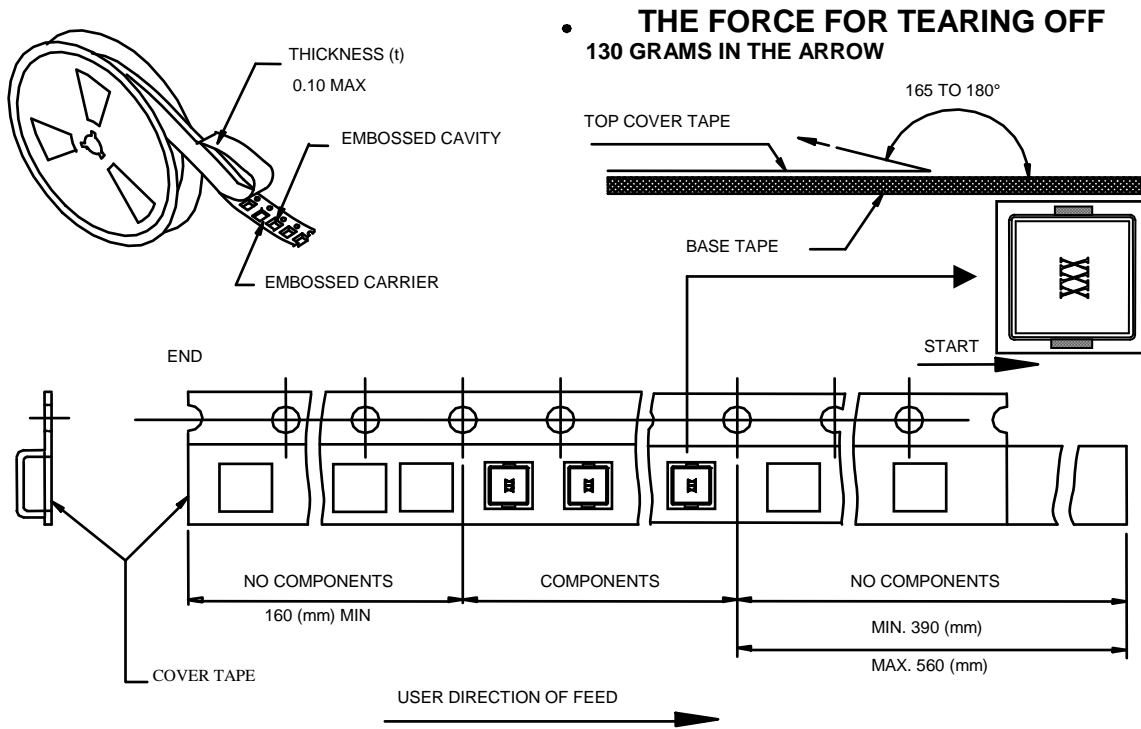
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## 6. TYPICAL RoHS REFLOW PROFILE



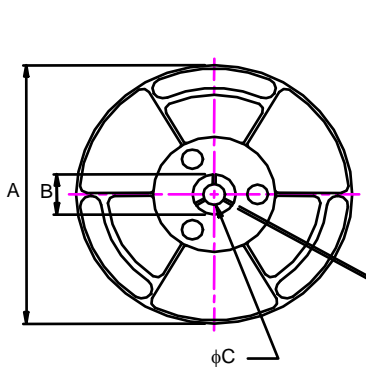
# SPECIFICATION FOR APPROVAL

## 7. PACKAGING



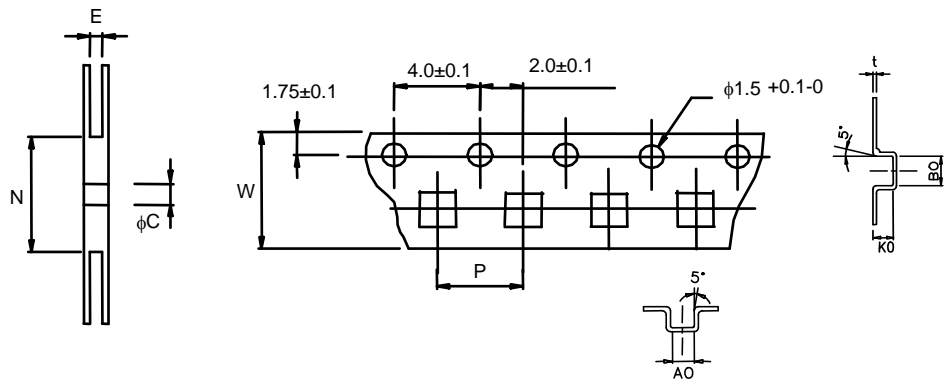
### ■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



**2000 Parts per Reel**

### ■ DIMENSIONS OF CARRIER TAPE (mm)



※ 10 sprocket hole pitch cumulative tolerance  $\pm 0.20$

**UNIT: mm**

	A	B	C	E	N	P	W	t	A0	B0	K0
<b>DIM.</b>	330	25	13	12.5	100	8	12.0	0.3	4.6	4.75	1.5
<b>TOL.</b>	$\pm 0.2$	$\pm 0.5$	$\pm 0.5$	$\pm 0.5$	MIN.	$\pm 0.1$	$\pm 0.3$	$\pm 0.05$	$\pm 0.2$	$\pm 0.2$	$\pm 0.2$