

SPECIFICATION FOR APPROVAL

CUSTOMER	_____
CUST. PART NO.	_____
CUST. DOC. REV.	_____
DESCRIPTION	<u>MOLDING POWER CHOKE(RoHS+H.F.)</u>
SAMPLE LOT NO.	_____
PART NO.	MCS0420-XXXMNX
DOC. REV.	ORIG
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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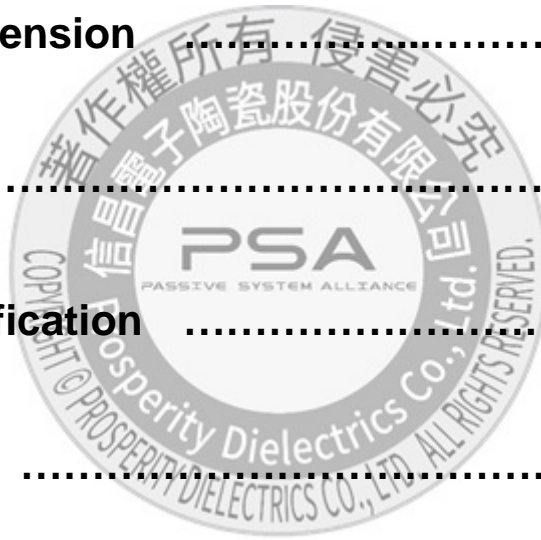
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TESTED BY	CHECKED BY	APPROVED BY

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CUSTOMER	CUSTOMER P/N	REV. —	SPL. LOT NO.	
PART NAME MOLDING POWER CHOKE(RoHS+H.F.)	PART NO. MCS0420-XXXMNX	REV. ORIG	DATE OF ISSUE	Q'TY 0 PCS

ENGINEERING CHANGE NOTICE - RECORD

REVISION NO.	REVISION DESCRIPTION	AUTHOR	DATE	REMARK
ORIG		Gary Chang		

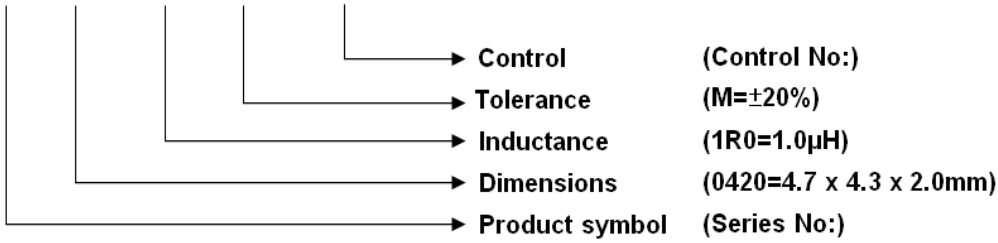


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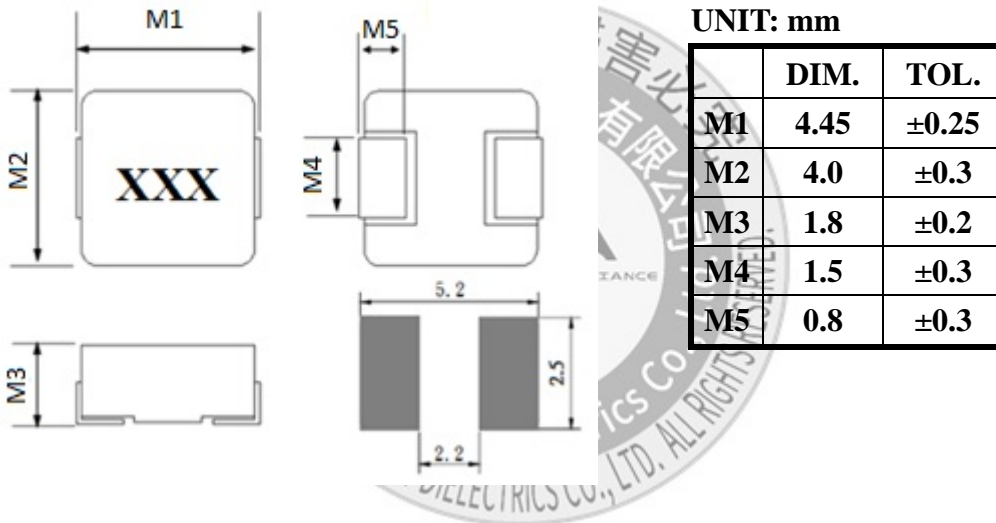
※This is a RoHS and REACH compliant product whose related documents are available on request.
 ※Graphic is only for dimensionally application.

1. PART NUMBERING IDENTIFICATION

MCS 0420- □□□ □ □□



2. MECHANICAL DIMENSION



3. MARKING

Marking ex:1.0uH →1R0



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4. ELECTRICAL SPECIFICATION

Part number	Inductance (uH) ±20%	DC Resistance (mΩ) Typical	DC Resistance (mΩ) MAX.	Rated Current (A) Typical	I sat (A) Typical
MCS0420-R10MN2	0.10	3.5	4.0	12.0	22.0
MCS0420-R15MN2	0.15	6.0	6.6	9.0	13.0
MCS0420-R22MN2	0.22	6.0	6.6	9.0	12.5
MCS0420-R47MN2	0.47	12.5	14.0	7.0	9.5
MCS0420-R56MN2	0.56	14.0	16.0	6.5	10.0
MCS0420-R68MN2	0.68	16.0	18.0	6.0	9.0
MCS0420-1R0MN2	1.0	24.0	27.0	4.5	7.0
MCS0420-1R2MN2	1.2	24.0	27.0	4.5	7.0
MCS0420-1R5MN2	1.5	38.0	46.0	4.0	6.0
MCS0420-2R2MN2	2.2	52.0	58.0	3.0	5.0
MCS0420-3R3MN2	3.3	74.0	87.0	2.5	4.0
MCS0420-4R7MN2	4.7	98.0	110.0	2.2	3.5
MCS0420-5R6MN2	5.6	105.0	115.0	1.8	3.5
MCS0420-6R8MN2	6.8	160.0	175.0	1.5	2.5
MCS0420-100MN1	10.0	256.0	282.0	1.2	2.2

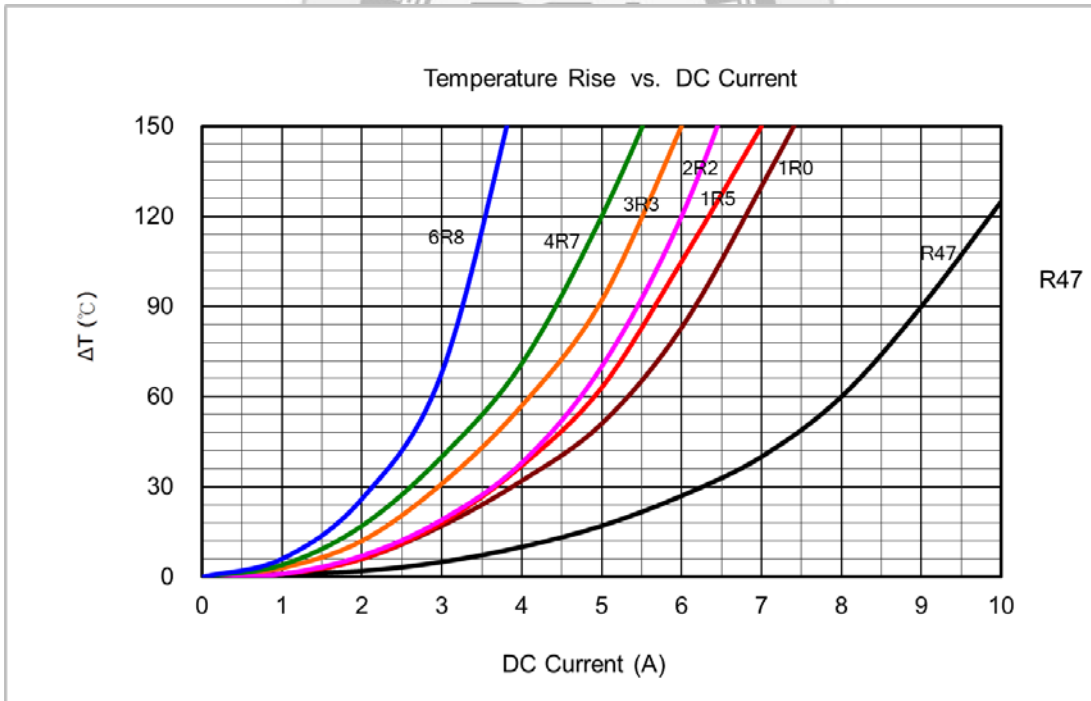
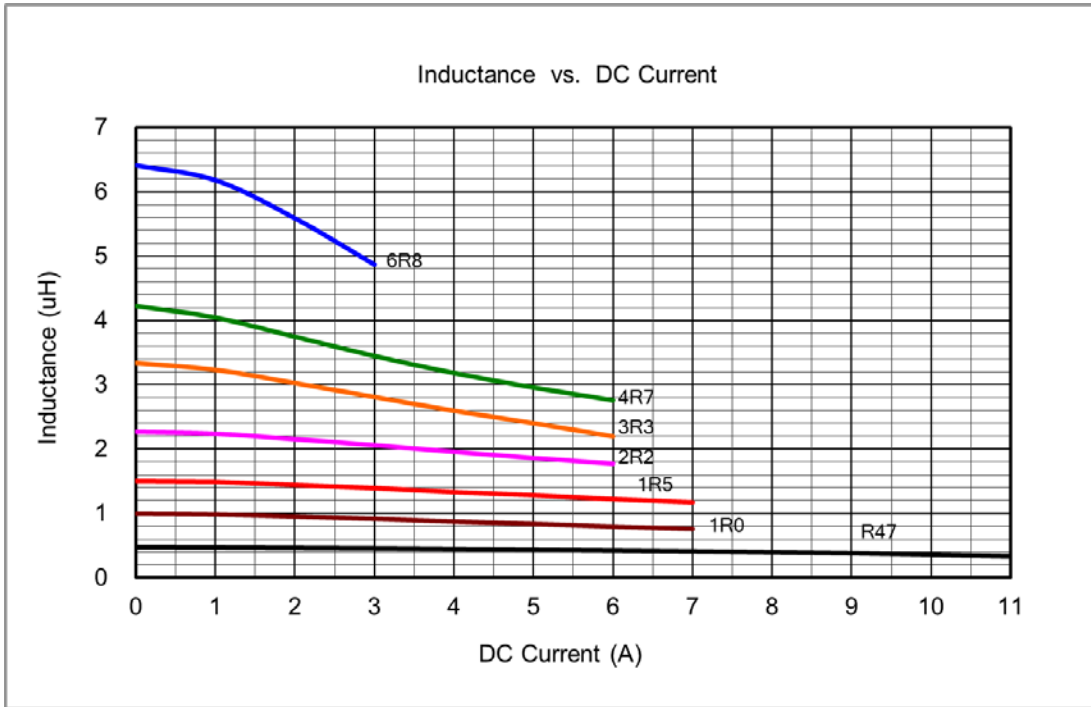
TEST INSTRUMENT: CHROMA 16502、Zentech1320+Zentech3305

NOTE:

1. Test Freq.: 100KHz, 0.5V
2. All test data is referenced to 25°C ambient.
3. Operating Temperature Range -25°C~+125°C.
4. Storage Temperature Range: -20°C~+40°C (<60% R.H.).
5. Rated Current: DC current(A) that will cause an approximate ΔT of 40°C.
6. I sat: DC current (A) that will cause Lo to drop approximately 30%.
7. The part temperature(ambient +temp rise) should not exceed 125°C under worst case operating conditions.
8. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature Part temperature should be verified.
9. MSL: Level 1

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5. ELECTRICAL CURVE



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6. RELIABILITY PERFORMANCE

Reliability Experiment For Electrical

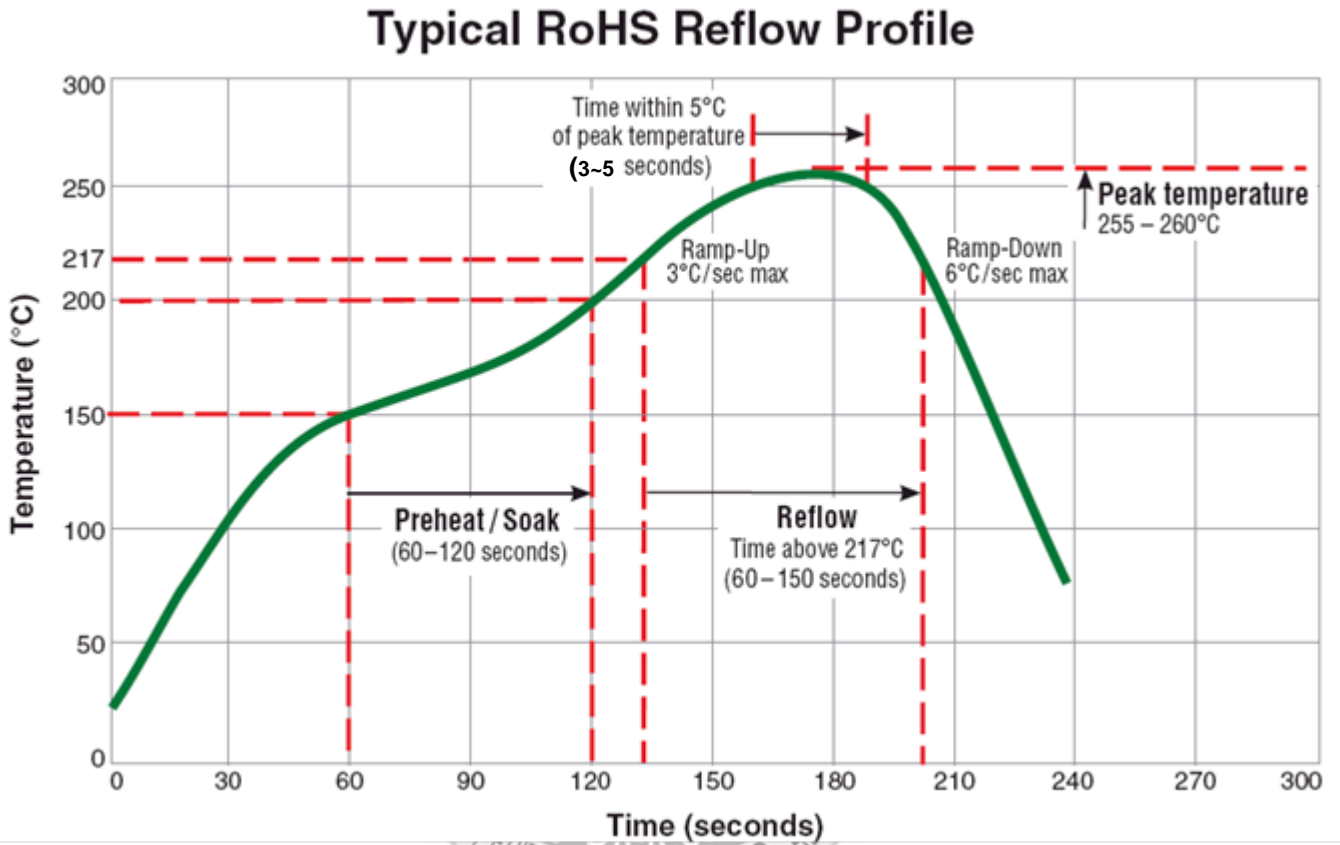
Test Item	Accept criteria	Test Condition	Standard Source
Humidity Test	1.Change from an initial value L:within±5% 2.no visible damage.	+40°C±2°C, humidity of 90% ±5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
High Temperature Test	1.Change from an initial value L:within±5% 2.no visible damage.	1.Temperature: +125°C±2°C. 2.Test time: 48±2hrs.	IEC 68-2 Test Condition B
Low Temperature Test	1.Change from an initial value L:within±5% 2.no visible damage.	1.Temperature: -25°C±2°C. 2.Test time: 48±2hrs.	IEC 68-2 Test Condition A
Thermal Shock	1.Change from an initial value L:within±5% 2.no visible damage.	+125°C±5°C (30 minutes) ~ -55±5°C (30 minutes), temperature switch time: 5 minutes (total 50 cycles) Wind speeds 10m/sec.	Reference MIL-STD-202G Method 107G Test Condition A-2
Life Test	1.Change from an initial value L:within±5% 2.no visible damage.	+70°C±5°C (250Hours).	Reference MIL-STD-202G Method 108A Test Condition B

Reliability Experiment For Physical

Test Item	Accept criteria	Test Condition	Standard Source
Vibration Test	1.Change from an initial value L:within±5% 2.no visible damage.	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	1.no visible damage.	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	1. Lead must have 95% above coverage.	Soak in 245°C solder pot of 3~5 Sec.	Reference J-STD-002D

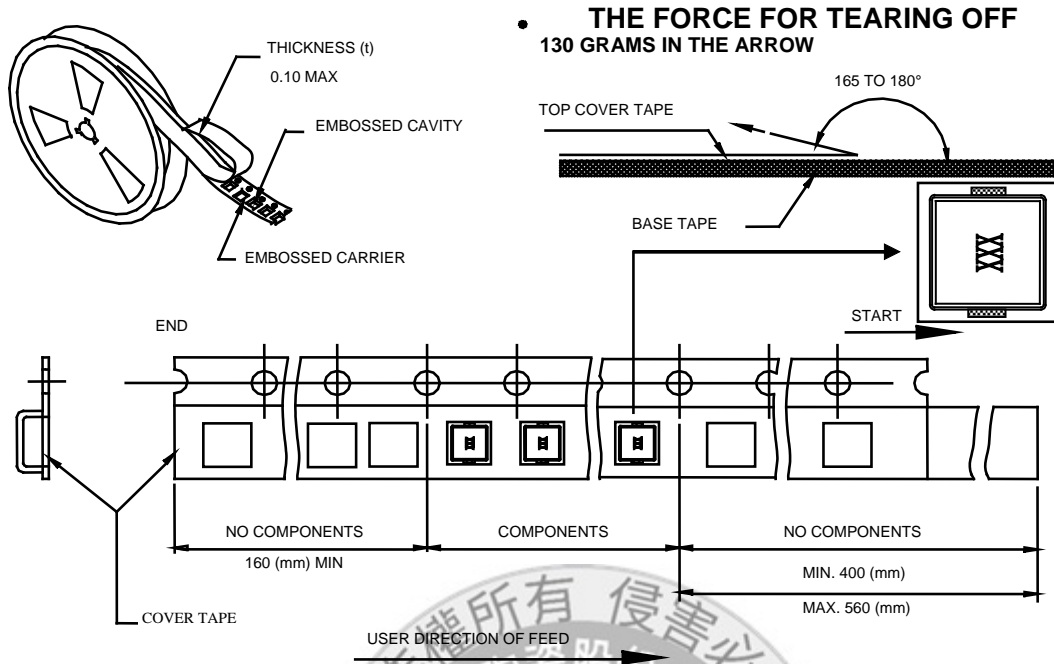
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7. TYPICAL RoHS REFLOW PROFILE



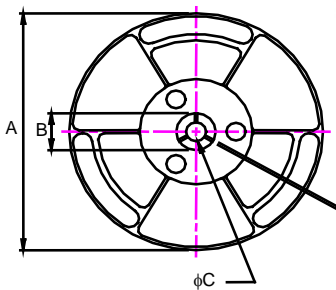
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8. PACKING



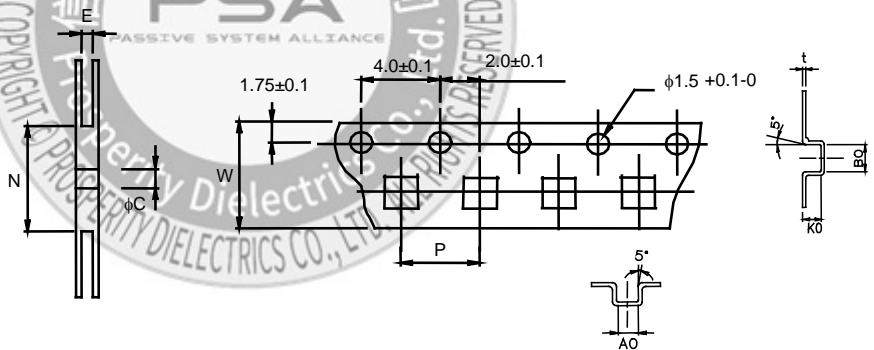
■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



2000 Parts per Reel

■ DIMENSIONS OF CARRIER TAPE (mm)



※ 10 sprocket hole pitch cumulative tolerance ± 0.20

UNIT: mm

	A	B	C	E	N	P	W	t	A0	B0	K0
DIM.	330	25.0	13.5	13.0	100	8.0	12.0	0.3	4.7	4.4	2.5
TOL.	± 0.2	± 0.5	± 0.5	± 0.5	MIN	± 0.1	± 0.3	± 0.05	± 0.1	± 0.1	± 0.1