

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.	MCS1040-XXXMXX
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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SPECIFICATION FOR APPROVAL

CUSTOMER	CUSTOMER P/N	REV. -	SPL. LOT NO.	
PART NAME HIGH CURRENT POWER CHOKE (ROHS+H.F.)	PART NO. MCS1040-XXXMXX	REV. ORIG	DATE OF ISSUE	Q'TY 0 PCS

ENGINEERING CHANGE NOTICE – RECORD

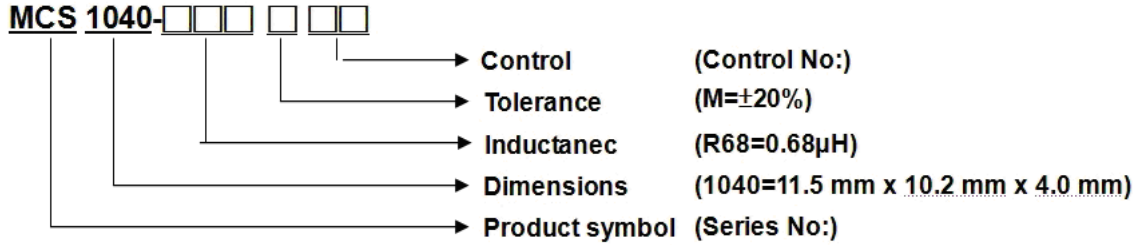
REVISION NO.	REVISION DESCRIPTION	AUTHOR	DATE	REMARK
ORIG		<i>Gary Chang</i>		

SPECIFICATION FOR APPROVAL

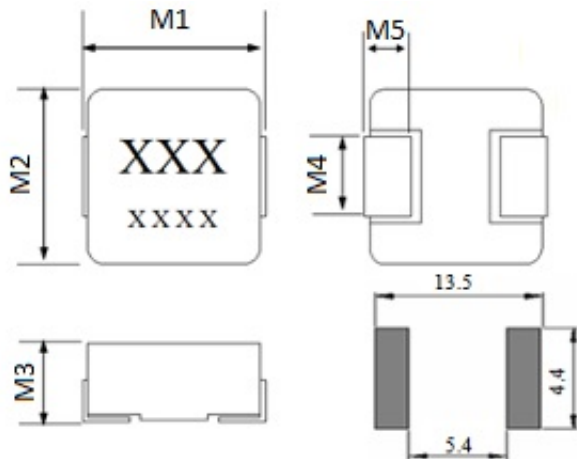
※This is a RoHS and REACH compliant product whose related documents are available on request.

※Graphic is only for dimensionally application.

1. PRODUCT IDENTIFICATION



2. PRODUCT DIMENSION



UNIT: mm

	DIM.	TOL.
M1	11.15	±0.35
M2	10.0	±0.3
M3	4.0	MAX.
M4	3.0	±0.5
M5	2.0	±0.5

3. MARKING AND DATE CODE

Marking ex:1.0uH → 1R0

Date code

XX XX → year and weekly ex:1033



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4. ELECTRICAL SPEC.

PART NO.	Inductance (μ H) $\pm 20\%$	DCR (m Ω) Typical 25 $^{\circ}$ C	DCR (m Ω) MAX.25 $^{\circ}$ C	Rated Current (A) Typical	I sat (A) Typical
MCS1040-R22MN1	0.22	0.80	1.0	30.0	50.0
MCS1040-R36MN1	0.36	1.1	1.2	34.0	40.0
MCS1040-R47MN1	0.47	1.3	1.55	25.0	35.0
MCS1040-R56MN1	0.56	1.6	1.8	25.0	32.0
MCS1040-R68MN1	0.68	2.4	2.7	22.0	30.0
MCS1040-1R0MN1	1.0	3.0	3.3	18.0	28.0
MCS1040-1R5MN1	1.5	3.8	4.2	16.0	21.0
MCS1040-2R2MN1	2.2	6.7	7.0	12.0	18.0
MCS1040-3R3MN1	3.3	10.8	11.8	10.0	16.0
MCS1040-4R7MN1	4.7	17.0	20.0	8.5	15.0
MCS1040-6R8MN1	6.8	22.5	25.0	6.5	9.0
MCS1040-8R2MN2	8.2	26.0	29.0	7.0	9.0
MCS1040-100MN1	10	27.0	30.0	7.5	8.5
MCS1040-150MCC	15	40.0	45.0	6.25	7.0
MCS1040-220MCC	22	60.0	66.0	5.0	5.5
MCS1040-330MCC	33	85.0	92.0	4.4	5.0
MCS1040-470MCC	47	130.0	145.0	3.3	3.5

TEST INSTRUMENT: CHROMA 16502 、Zentech1320+Zentech3305

- (1). Test Freq : 100KHz , 1.0V
- (2). All test data is referenced to 25 $^{\circ}$ C ambient.
- (3). Operating Temperature Range -55 $^{\circ}$ C to +125 $^{\circ}$ C.
- (4). Rated Current: DC current(A)that will cause an approximate Δ T of 40 $^{\circ}$ C.
- (5). I sat: DC current(A)that will cause Lo to drop approximately 30%.
- (6). The part temperature(ambient +temp rise)should not exceed 125 $^{\circ}$ C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature Part temperature should be verified

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5. RELIABILITY PERFORMANCE

Reliability Experiment For Electrical

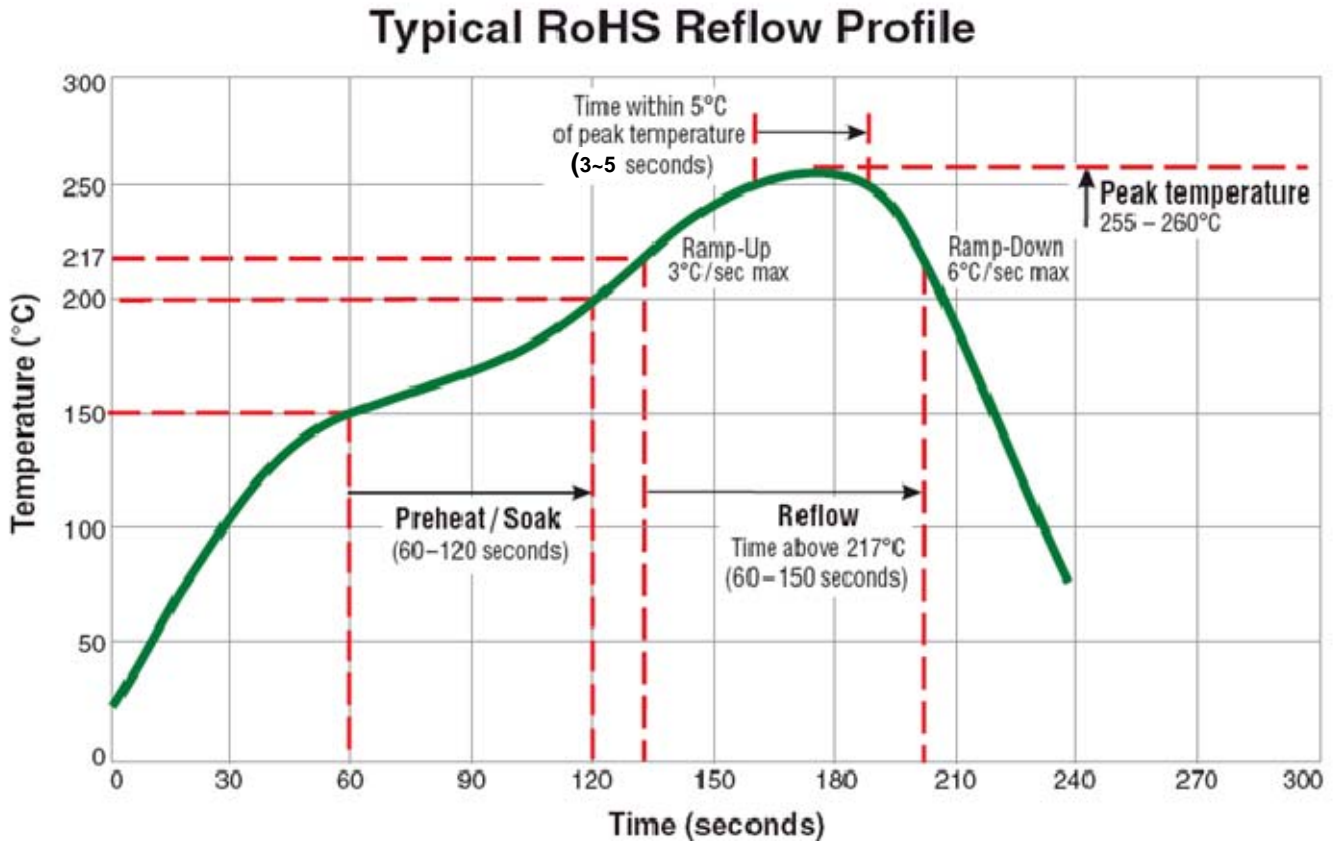
Test Item	Test Condition	Standard Source
Humidity Test	+40°C±2°C, humidity of 90%±5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
High Temperature Test	1.Temperature: +125°C±2°C. 2.Test time: 48±2hrs.	IEC 68-2 Test Condition B
Low Temperature Test	1.Temperature: -40°C±2°C. 2.Test time: 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

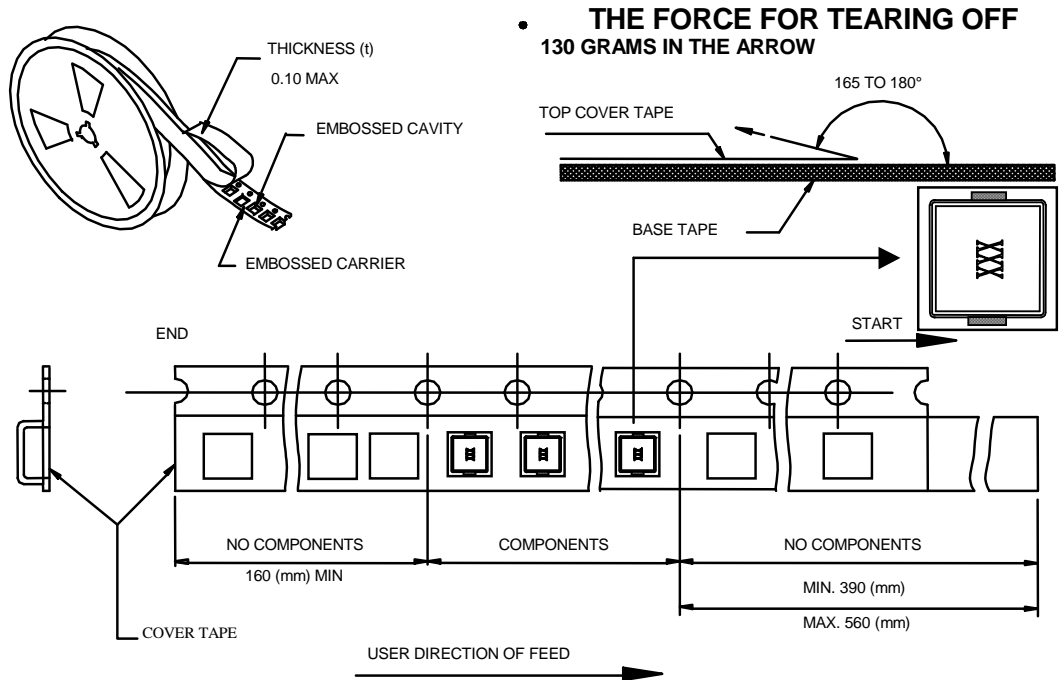
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6. TYPICAL RoHS REFLOW PROFILE



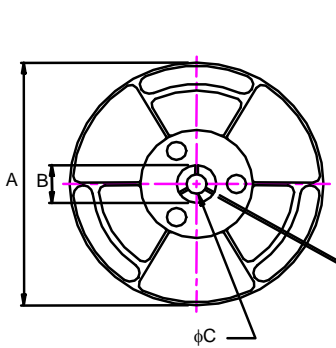
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7. PACKAGING



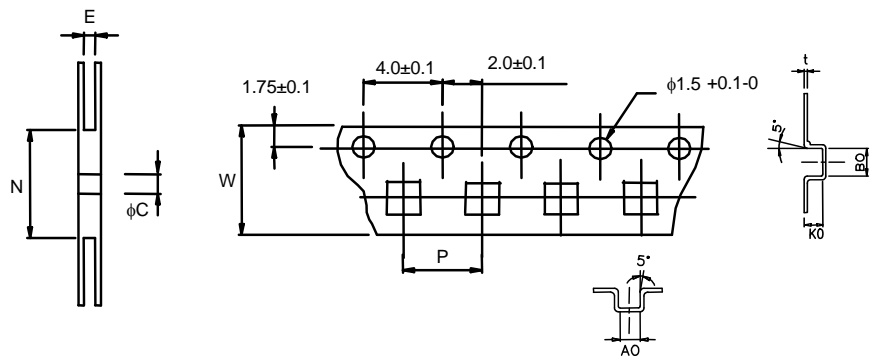
■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



500 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	13.0	24.6	100	16.0	24.0	0.4	10.6	11.7	4.25
TOL.	±0.2	±0.5	±0.5	±0.5	MIN	±0.1	±0.3	±0.05	±0.1	±0.1	±0.1