APPROVAL SHEET

PRODUCT	**Ferrite Chip Bead (MHC G)**
SERIES	MHC G
PART NO.	
DESCRIPTION	
ISSUE DATE	2023/11/29
REVISION DATE	2023/11/29
REFERENCE NO.	00031XXXXXXX

RoHS COMPLIANCE ITEM

Halogen Free

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PSA PASSIVE SYSTEM ALLIANCE
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CUSTOMER APPROVAL

CUSTOMER _____ **CUSTOMER PN** _____

■ **Vendor:**
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Tel. 886-3-475-3711 www.passivecomponent.com

■ **Manufacturer:**
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Tel. 886-37-585-555 www.inpaq.com.tw

Note:
- The product is subjected to changes in accordance with individual product change notification (PCN) agreement (if any) or Walsin Technology Corporation's policy.
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Ferrite Chip Bead for High Current (MHC G Series)

This product belongs to the 3C and industrial grade standard, not for automotive application. If customer privately uses to automotive parts and results in any consequences, INPAQ is not responsible for after-sales service, thank you!

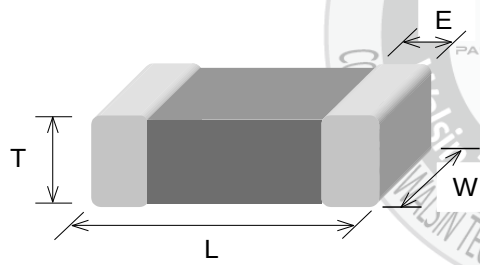
■ FEATURES

- Combination of high frequency noise suppression with capability of handing high current
- The current rating up to 6 Amps with low DCR

■ APPLICATIONS

- High current DC power lines
- Circuits where a stable ground in unavailable

■ SHAPES AND DIMENSIONS



TYPE	1005 (EIA 0402)
L	1.00±0.10
W	0.50±0.10
T	0.50±0.10
E	0.25±0.10
Unit	mm

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■ PART NUMBER CODE

MHC	1005	G	12	1	M	B	P	□
1	2	3	4	5	6	7	8	9

1. Series Name
2. Size Code：the first two digitals : length(mm) , the last two digitals : width(mm)
3. Material Code
4. Impedance(Ω) ± 25%
5. Fixed Decimal Point
6. Rated Current Code

(ex：600 = 60Ω；121 = 120Ω)

L=1000mA	M=1500mA	N=2000mA	P=2500mA	Q=3000mA
R=4000mA	U=5000mA	W=6000mA	Z=other(refer to code 9)	

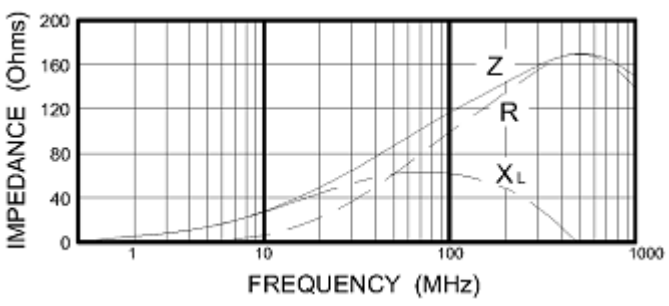
7. Soldering：Green Parts：A— Soldering Lead-Free、B— Lead-Free for whole chip
8. Packaging：P - Paper tape, 7" reel.
9. Rated Current Value：1A2 = 1.2A；A80 = 800mA

■ PART NUMBER AND CHARACTERISTICS TABLE

Part No.	Impedance (Ω) +/-25%	Test Freq. (MHz)	DCR(Ω) (Max.)	Rated Current (mA)
MHC1005G121MBP	120	100	0.095	1500
	•Test Level：250 mV			
Test Instruments：	• Agilent E4991A/B RF IMPEDANCE / MATERIAL ANALYZER or EQUIVALENT •HP4338A/B MILLIOHMMETER •Agilent E5071C ENA SERIES NETWORK ANALYZER •HP6632B SYSTEM DC POWER SUPPLY			

*1：For special part number which is not shown in the above table, please refer to appendix.

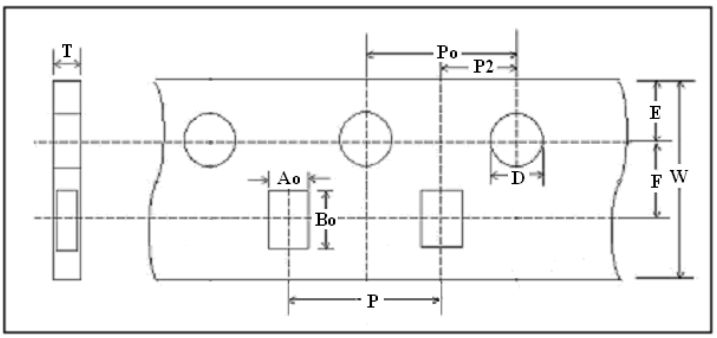
■ TYPICAL CHARACTERISTIC



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■ TAPE AND REEL SPECIFICATIONS

PAPER CARRIER



■ TAPING DIMENSIONS

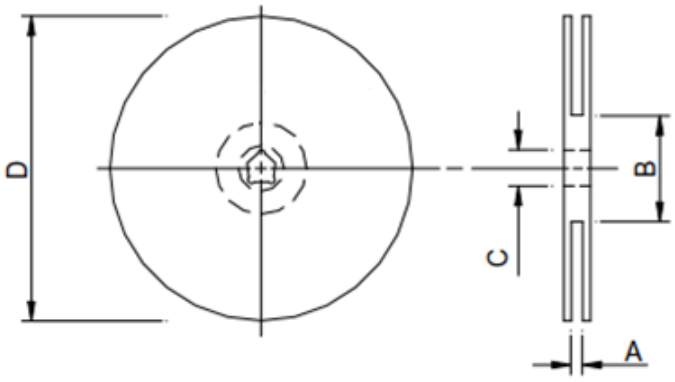
Unit: mm

Size	**1005**
Symbol	PAPER
W	8.00±0.10
P	2.00±0.05
E	1.75±0.05
F	3.50±0.05
D	1.55±0.05
D1	NA
Po	4.00±0.10
Po10	NA
P2	2.00±0.05
Ao	0.62±0.03
Bo	1.12±0.03
Ko(T)	0.60±0.03
t	NA

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■ REEL DIMENSIONS

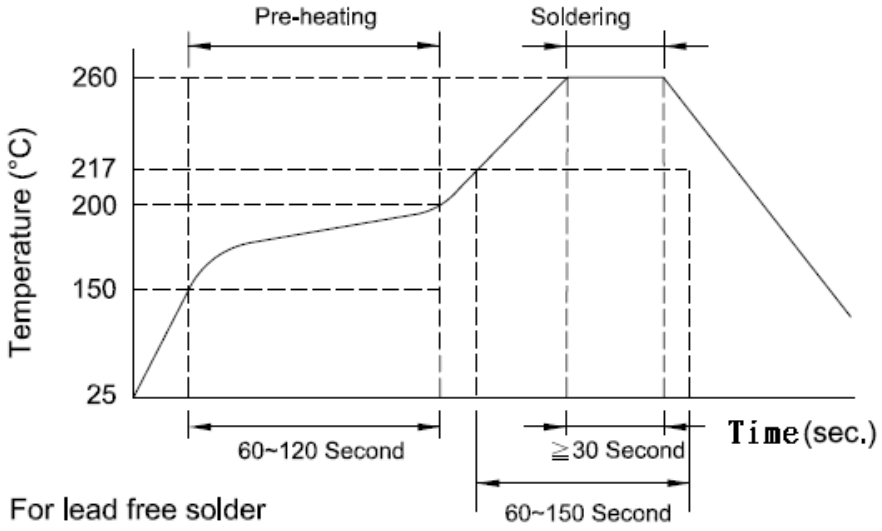


Type	7"
A(mm)	10±1.5
B(mm)	50 or more
C(mm)	13.2±1.0
D(mm)	178±2.0

7" Reel Packaging Quantity	
PART SIZE (EIA SIZE)	**1005 (0402)**
Qty.(pcs)	10,000
BOX	5 reels / inner box

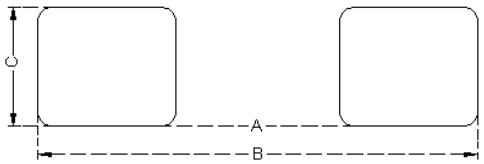
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■ RECOMMENDED SOLDERING CONDITIONS



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■ LAND PATTERNS FOR REFLOW SOLDERING



■ SOLDERING SOLDER LAND INFORMATION

Unit: mm (inches)

Size	A	B	C
1005	0.4 (0.016)	1.2 ～ 1.4 (0.047 ～ 0.055)	0.5 (0.020)

■ GENERAL TECHNICAL DATA

Operating temperature range：- 55℃ ~ +125℃
Storage Condition：Less than 40℃ and 70% RH
Storage Time：12 months Max.
Soldering method：Reflow

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■ RELIABILITY AND TEST CONDITION

Test item	Test condition	Criteria
Thermal Shock	a. Temperature : -40 ~ +85℃ b. Cycle : 100 cycles c. Dwell time : 30minutes d. Measurement : at ambient temperature 24 hrs after test completion	a. No mechanical damage b. Impedance value should be within ± 20 % of the initial value
Operational Life	a. Temperature : 125℃ ± 5℃ b. Test time : 1000 hrs c. Apply current : full rated current d. Measurement : at ambient temperature 24 hrs after test completion	a. No mechanical damage b. Impedance value should be within ± 20 % of the initial value
Rated Current Test	a. Apply current : full rated current / 5min	Temperature rise should be less than 40℃
Biased Humidity	a. Temperature : 40℃ ± 2℃ b. Humidity : 90 ~ 95 % RH c. Test time : 1000 hrs d. Apply current : full rated current e. Measurement : at ambient temperature 24 hrs after test completion	a. No mechanical damage b. Impedance value should be within ± 20 % of the initial value
Resistance to Solder Heat	a. Solder temperature : 260 ± 5 ℃ b. Flux : Rosin c. DIP time : 10 ± 1 sec	a. More than 95 % of terminal electrode should be covered with new solder b. No mechanical damage c. Impedance value should be within ± 20 % of the initial value

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Test item	Test condition	Criteria
Adhesive Test	a. Reflow temperature : 245℃ It shall be Soldered on the substrate applying direction paralle1 to the substrate b. Apply force(F) : 5 N c. Test time : 10 sec	a. No mechanical damage b. Soldering the products on PCB after the pulling test force > 5 N
Steam Aging Test	a. Temperature : 93℃ b. Test time : 4 hrs c. Solder temperature : 235 ± 5℃ d. Flux : Rosin e. DIP time : 5 ± 1 sec	More than 95 % of terminal electrode should be covered with new solder

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