

Chip Ferrite Bead For High Speed

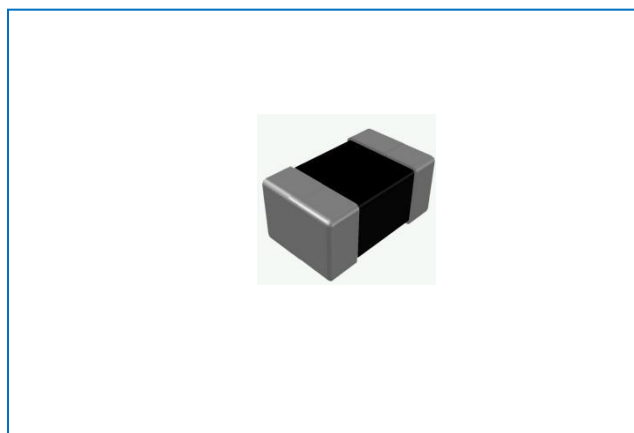
MCB 1005-2012 H Series

FEATURE

- ◆ Monolithic inorganic material construction
- ◆ Closed magnetic circuit avoids crosstalk
- ◆ SMD Type & suitable for reflow and wave soldering
- ◆ Available in various sizes
- ◆ Excellent solder ability and heat resistance
- ◆ High reliability
- ◆ With a sharp and frequency frequency impedance characteristics which can effectively filter high frequency noise without attenuating high frequency signal

APPLICATIONS

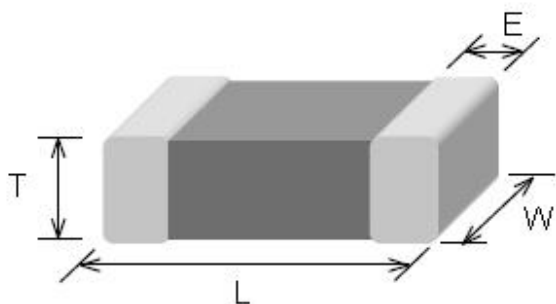
Filtering between analog and digital circuitry, clock generation circuitry, I/O interconnects, isolation between RF noisy circuits and logic devices susceptible to functional degradation, power supply filtering to prevent conducted RF energy from corrupting the power generation circuitry. Sharp impedance characteristics can effectively minimize attenuation, high frequency EMI prevention of LCD monitor, PDA, Computers, Computer peripherals, Cellular Equipment, Digital TV, Digital Cameras, Audio/Visual Equipment, DVD, Wireless Communication Devices, MP3.



MECHANICAL DATA

- ◆ Operating temperature range : - 55°C ~ +125°C
- ◆ Storage Condition : Less than 40°C and 70% RH
- ◆ Storage Time: 6 months(Size:1005)
- ◆ 12 months(Size:1608 above)
- ◆ Soldering method: Reflow or Wave Soldering

SHAPES AND DIMENSIONS



Unit: mm

Type	1005 (EIA 0402)	1608 (EIA 0603)	2012 (EIA 0805)
L	1.00±0.10	1.60±0.15	2.00±0.20
W	0.50±0.10	0.80±0.15	1.25±0.20
T	0.50±0.10	0.80±0.15	0.90±0.20
E	0.25±0.10	0.30±0.20	0.50±0.30

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PART NUMBER CODE

MCB 1608 H 12 1 E B P
 1 2 3 4 5 6 7 8

- 1 Series Name
- 2 Size Code: the first two digitals : length(mm), the last two digitals : width(mm)
- 3 Material Code
- 4 Impedance(Ω) $\pm 25\%$ } (ex : 121=120 Ω)
- 5 Fixed Decimal Point }
- 6 Rated Current Code

A=50mA	B=80mA	C=100mA	D=150mA	E=200mA	F=300mA
G=400mA	H=500mA	I=600mA	J=700mA	K=800mA	

- 7 Soldering : Green Parts: A— Soldering Lead-Free B— Lead-Free for whole chip
- 8 Packaging: P - Embossed paper tape, 7" reel.

PART NUMBER AND CHARACTERISTICS TABLE

Part No.	Impedance(Ω) +/-25%	Test Freq.(MHz)	DCR(Ω) (Max.)	Rated Current (mA)
MCB1005-H Series				
MCB1005H750FBP	75	100	0.40	300
MCB1608-H Series				
MCB1608H200HBP	20	100	0.25	500
MCB1608H750HBP	75	100	0.35	500
MCB1608H800HBP	80	100	0.35	500
MCB1608H121EBP	120	100	0.45	200
MCB1608H301EBP	300	100	0.45	200
MCB1608H601EBP	600	100	0.50	200
MCB1608H102EBP	1000	100	0.60	200

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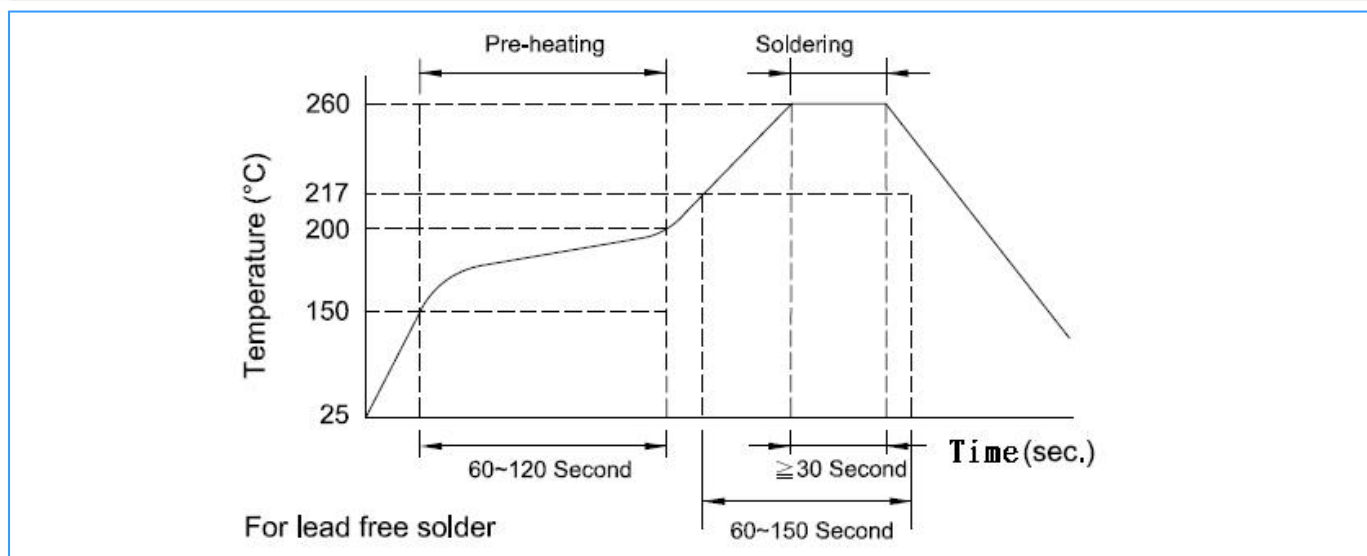
PART NUMBER AND CHARACTERISTICS TABLE

Part No.	Impedance(Ω) +/-25%	Test Freq.(MHz)	DCR(Ω) (Max.)	Rated Current (mA)
MCB2012-H Series				
MCB2012H121EBP	120	100	0.25	200
MCB2012H221EBP	220	100	0.25	200
MCB2012H301EBP	300	100	0.25	200
MCB2012H601EBP	600	100	0.35	200
Test Instruments:	<ul style="list-style-type: none"> ● Test Level : 250 mV ● HP4291B RF IMPEDANCE / MATERIAL ANALYZER ● HP4338A/B MILLIOHMMETER ● Agilent 8720ES S-PARAMETER NETWORK ANALYZER ● HP6632B SYSTEM DC POWER SUPPLY 			

RECOMMENDED SOLDERING CONDITIONS

PART SIZE (EIA SIZE)		1005 (0402)	1608 (0603)	2012 (0805)
7" REEL	Qty. (pcs)	10000	4000	4000

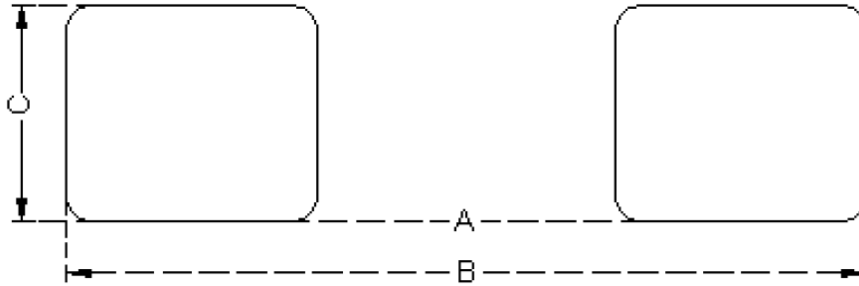
REEL PACKAGING QUANTUTY



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SOLDER LAND INFORMATION



Unit: mm (inches)

Size	A	B	C
1005	0.40 ~ 0.60 (0.015 ~ 0.023)	1.60 ~ 2.60 (0.063 ~ 0.102)	0.40 ~ 0.70 (0.016 ~ 0.027)
1608	0.50 ~ 0.70 (0.019 ~ 0.027)	2.10 ~ 3.10 (0.083 ~ 0.122)	0.65 ~ 0.95 (0.026 ~ 0.037)
2012	1.00 ~ 1.20 (0.039 ~ 0.047)	3.00 ~ 4.00 (0.118 ~ 0.157)	0.80 ~ 1.10 (0.031 ~ 0.043)

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RELIABILITY AND TEST CONDITION

Test item	Test condition	Criteria
Temperature Cycle	A. Temperature : -40 ~ +85°C B. Cycle : 100 cycles C. Dwell time : 30minutes 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°C ± 5°C B. Test time : 1000 hrs C. Apply current : full rated current Measurement : at ambient temperature 24 hrs after test completion	A. No mechanical damage B. Impedance value should be within ± 20 % of the initial value
Biased Humidity	A. Temperature : 40 ± 2°C B. Humidity : 90 ~ 95 % RH C. Test time : 1000 hrs D. Apply current : full rated current 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°C 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
Steam Aging Test	A. Temperature : 93 ± 2°C B. Test time : 4 hrs C. Solder temperature : 235 ± 5°C D. Flux : Rosin E. DIP time : 5 ± 1 sec	More than 95 % of terminal electrode should be covered with new solder