

# MTC



## Ferrite Chip Bead For High Speed

- Impedance Range : 20 to 1000 Ohms
- Operating Temperature Range : -55°C to +125°C
- Soldering Method : Reflow or Wave Soldering
- Packaging Method : Tape & Reel (per EIA Specifications)
- Storage Temperature : -40°C to +85°C, 70% RH

The monolithic construction performs high reliability and ensures a closed magnetic flux in a component avoids magnetic leakage and interference, thus allows for higher mounting density. MCB H and U series have a sharp and high frequency impedance characteristics which can eddectively filter high frequency noise without attenuating high frequency signal.

## Application Field

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 and high frequency 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.

## Part Number Code

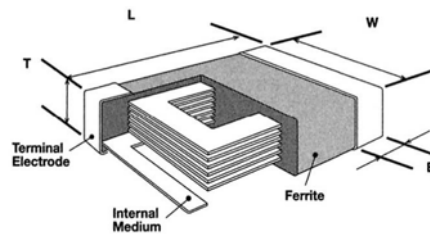
**MCB 1608 H 12 1 A A**  
 ① ② ③ ④ ⑤ ⑥ ⑦

1. Series Name
2. Size Code the first two digitals : length(mm), the last two digitals : width(mm)
3. Product Characteristics : H = For High Speed U = For Ultra high speed
4. Impedance( $\Omega$ ) + 25% (ex : 600=60 $\Omega$  : 601=600 $\Omega$ )
- 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 A=Lead fred

## Shape and Dimensions 外型與尺寸

Unit : mm (nches)

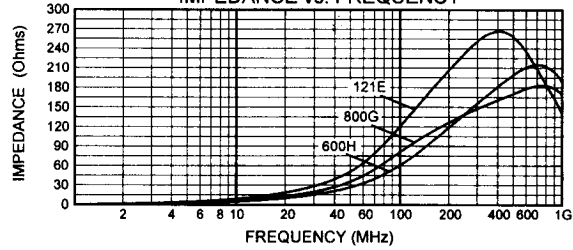
Size 尺寸	Length 長度(L)	Width 寬度(W)	Thickness 厚度(T)	Electrode Width 端電極寬度(E)
1608 (0603)	1.60±0.150 (0.063±0.006)	0.80±0.150 (0.031±0.006)	0.80±0.150 (0.031±0.006)	0.30±0.200 (0.012±0.008)
2012 (0805)	2.0±0.200 (0.079±0.008)	1.25±0.200 (0.049±0.008)	0.90±0.200 (0.035±0.008)	0.50±0.300 (0.020±0.012)
3216 (1206)	3.20±0.200 (0.126±0.008)	1.60±0.200 (0.063±0.008)	1.10±0.200 (0.043±0.008)	0.50±0.300 (0.020±0.012)



# Impedance VS. Frequency

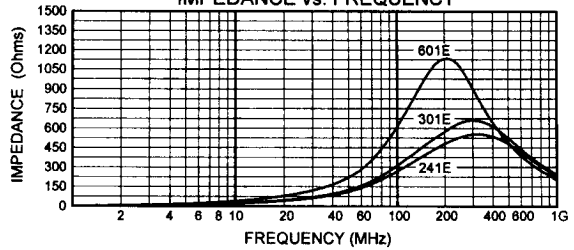
## MCB1608H 600H,800G&121E

### IMPEDANCE vs. FREQUENCY



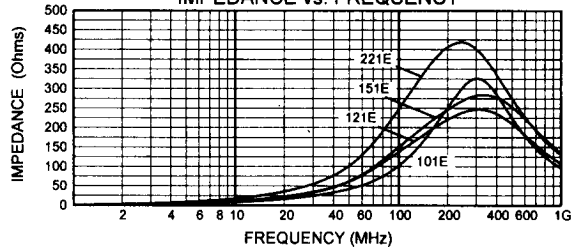
## MCB1608H 241E,301E&601E

### IMPEDANCE vs. FREQUENCY



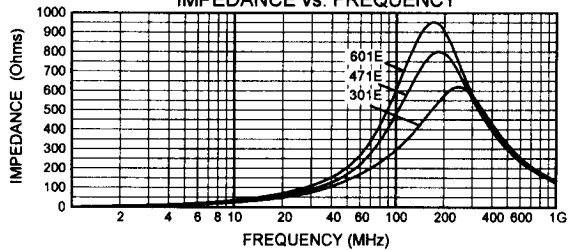
## MCB2012H 101E,121E,151E&221E

### IMPEDANCE vs. FREQUENCY



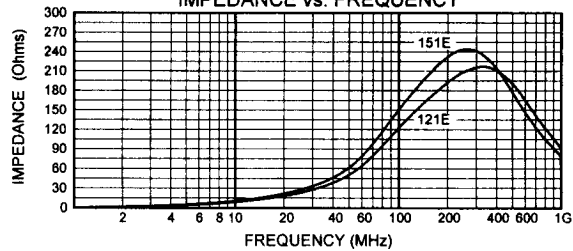
## MCB2012H 301E,471E&601E

### IMPEDANCE vs. FREQUENCY



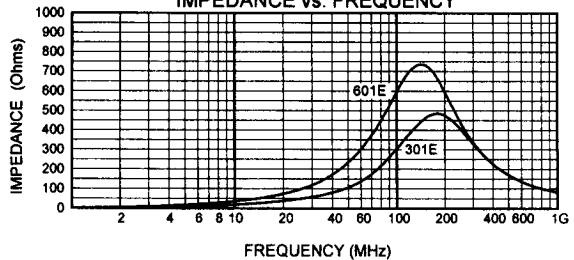
## MCB3216H 121E&151E

### IMPEDANCE vs. FREQUENCY



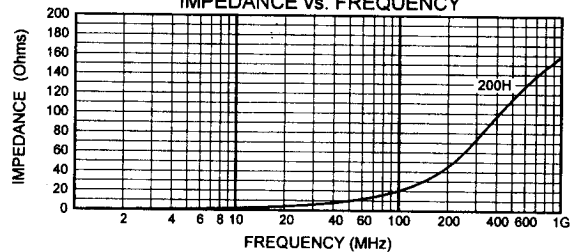
## MCB3216H 301E&601E

### IMPEDANCE vs. FREQUENCY



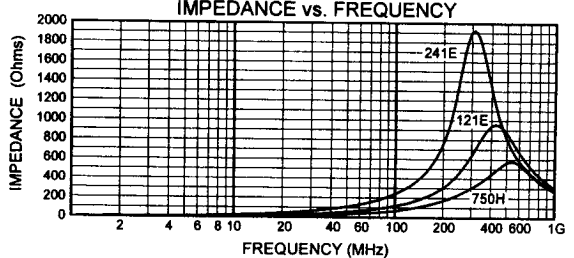
## MCB1608U 200H

### IMPEDANCE vs. FREQUENCY

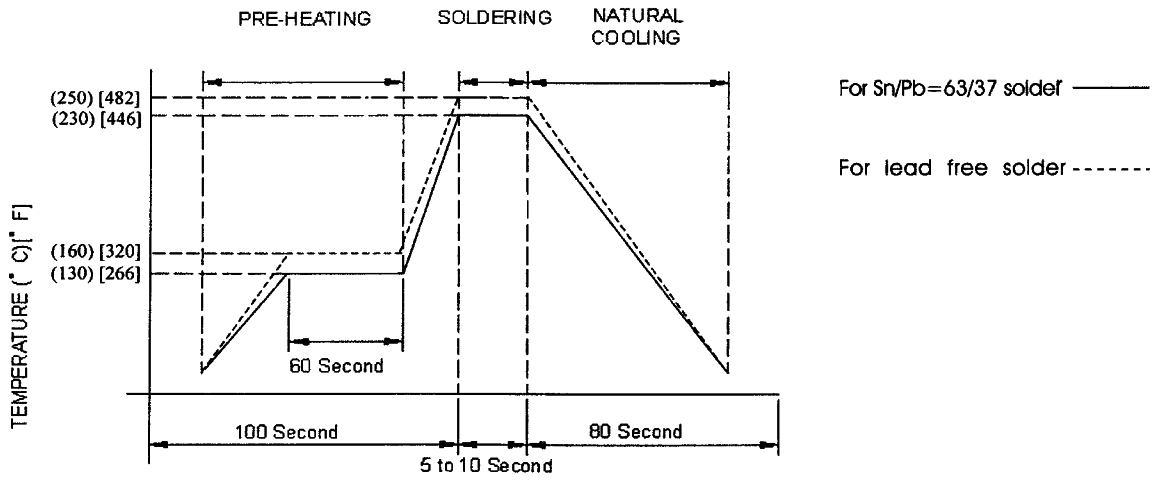


## MCB1608U 750H,121E&241E

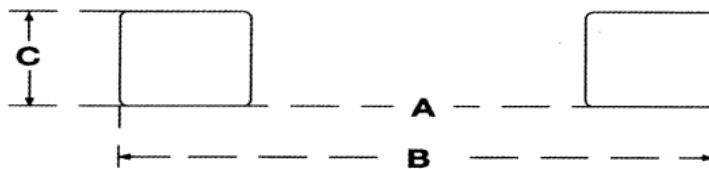
### IMPEDANCE vs. FREQUENCY



## Recommended soldering Conditions



## Land patterns for Reflow Soldering



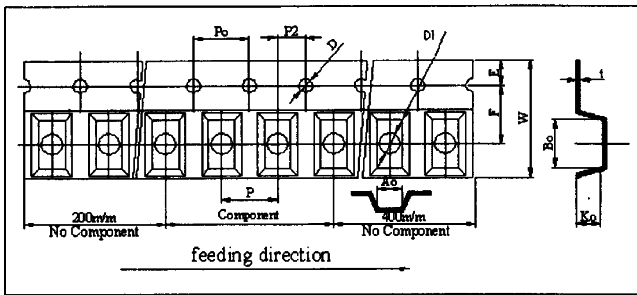
## Solder Land Information

SIZE	A	B	C
1005	04~0.6 (0.015~0.023)	1.6~2.6 (0.063~0.102)	04~0.7 (0.0157~0.027)
1608	0.5~0.7 (0.19~0.027)	2.1~3.1 (0.083~0.122)	0.65~0.95 (0.026~0.037)
2012	1.0~1.2 (0.039~0.047)	3.0~4.0 (0.118~0.157)	0.8~1.1 (0.031~0.043)
3216	2.0~2.4 (0.079~0.094)	4.2~5.2 (0.165~0.204)	1.0~1.4 (0.039~0.055)
3225	2.1~2.3 (0.082~0.09)	4.2~5.2 (0.165~0.204)	2.2~2.5 (0.0866~0.098)
4516	3.4~3.7 (0.133~0.145)	6.3~7.3 (0.248~0.287)	1.3~1.7 (0.051~0.067)
4532	3.4~3.7 (0.133~0.145)	6.3~7.3 (0.248~0.287)	2.9~3.2 (0.144~0.126)

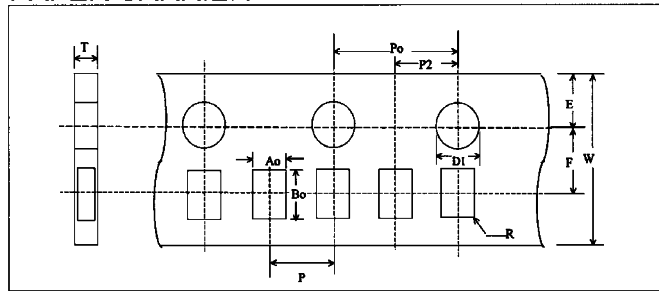
\* Note : for W133E soldring ,add 0.030"(0.7620tothe "C" dimension.

# Tape and Reel Specification

## PLASTIC CARRIER



## PAPER CARRIER



## Reel Packaging Quantity

PART SIZE	1005	1608	201209	201212	3216	3225	4516	4532
7" REEL	4,000	4,000	4,000	3,000	3,000	2,000	2,000	1,000
13"	10,000	10,000	10,000	10,000	10,000	5,000	5,000	2,500
BULK	20,000	20,000	20,000	20,000	20,000	10,000	10,000	10,000

## TAPING DIMENSIONS

TYPE	453215	451616	322513	321611	201212	201209	160808	100505
W	12±0.1	11.9~12.3	7.9~8.3	7.9~8.3	7.9~8.3	7.9~8.3	7.9~8.3	7.9~8.3
P	8	4.0~0.1	4.0~0.1	4.0~0.1	4.0~0.1	4.0~0.1	4.0~0.1	4.0~0.1
E	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1
F	5.5±0.05	5.5±0.1	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05
D	1.55±0.05	1.55±0.1	1.55±0.05	1.55±0.05	1.50±0.05	1.50±0.05	1.5±0.05	1.50±0.05
D1	1.5~1.75	1.5~1.75	1.0~1.25	1.55±0.05	1.0~1.25	1.0~1.25	0.79±0.125	0.0±0
Po	4.0±0.1	4.0±0.1	4.0±0.1	1.0~1.25	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1
Po10	40±0.2	40±0.2	40±0.2	4.0±0.2	40±0.2	40±0.2	40±0.2	40±0.2
P2	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.05
Ao	3.66±0.1	1.829±0.1	2.57±0.1	1.854±0.1	1.42±0.1	1.42±0.1	1.0±0.1	0.65±0.1
Bo	4.95±0.1	4.849±0.1	3.4±0.1	3.429±0.1	2.24±0.1	2.24±0.1	1.8±0.1	1.18±0.1
Ko	1.83±0.1	1.829±0.1	1.32±0.1	1.219±0.1	1.04±0.1	1.04±0.1	1.0±0.1	0.62±0.1
T	0.23±0.1	0.292±0.1	0.25±0.1	0.254±0.1	0.25±0.1	0.25±0.1	0.254±0.1	0.25±0.1
Pcs/Reel	1000 pcs	2000 pcs	2000 pcs	3000 pcs	3000 pcs	4000 pcs	4000 pcs	4000 pcs

Reel	13"	13"	7"	7"
W	8±1.0	12±1.0	8±1.0	12±1.0
	0.31±0.039	0.47±0.039	0.31±0.039	0.47±0.039
A	330±2.0 (13.00±0.078)		178±2.0 (7.00±0.078)	
B	95±1.0 (3.74±0.039)			
C	13±0.5 (0.51±0.020)			
D	21±0.8 (0.82±0.031)			
E	2±0.5 (0.08±0.020)			
t	2 (0.078)		1 (0.039)	

## Reel Dimensions (per EIA Standard)

