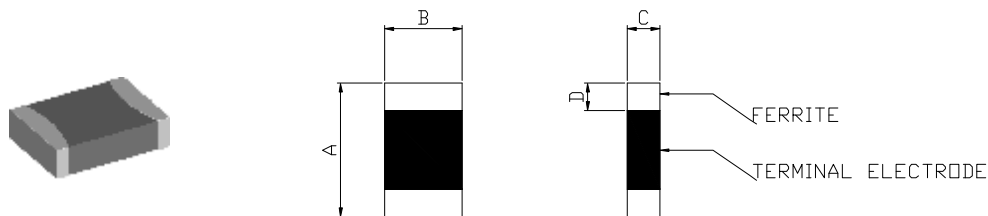


## MECHANICALS



### I FEATURE

1. The small size chips generating high impedance.
2. Either flow or reflow soldering methods can be used due to electroplating of the terminal electrodes.
3. High reliability due to an entirely monolithic structure
4. Low DC resistance structure of electrode prevents wasteful electric power consumption

### I APPLICATIONS

1. computers and peripheral equipment;
2. VCRs, Television, pagers
3. Cellular phones;
4. digital communication equipment;
5. Various electronics equipments;
6. Circuit where a stable ground is unavailable.

### I 特性

1. 尺寸小同時具有高阻值
2. 由于外電極是電鍍而成，適用 flow 和 reflow 兩種焊錫方式
3. 單石結構具有高信賴性
4. 電極之低直流阻抗可避免無謂的電力損耗

### I 用途

1. 電腦及周邊設備
2. 錄放影機，電視機，呼叫器
3. 手提電話
4. 數位通訊設備
5. 個種電子設備
6. 缺乏穩定基板之電路

### I TYPE AND DIMENSIONS

TYPE	A	B	C	D
MB453215 (1812)	4.5±0.2 (0.177±0.008)	3.2±0.2 (0.126±0.008)	1.5±0.2 (0.059±0.008)	0.5±0.3 (0.020±0.012)
MB451616 (1806)	4.5±0.2 (0.177±0.008)	1.6±0.2 (0.063±0.008)	1.6±0.2 (0.063±0.008)	0.5±0.3 (0.020±0.012)
MB322513 (1210)	3.2±0.2 (0.126±0.008)	2.5±0.2 (0.098±0.008)	1.3±0.2 (0.051±0.008)	0.5±0.3 (0.020±0.012)
MB 321616 (1206)	3.2±0.2 (0.126±0.008)	1.6±0.2 (0.063±0.008)	1.6±0.2 (0.063±0.008)	0.5±0.3 (0.020±0.012)
MB 321611 (1206)	3.2±0.2 (0.126±0.008)	1.6±0.2 (0.063±0.008)	1.1±0.2 (0.043±0.008)	0.5±0.3 (0.020±0.012)
MB 201209 (0805)	2.0±0.2 (0.079±0.008)	1.2±0.2 (0.047±0.008)	0.9±0.2 (0.035±0.008)	0.5±0.3 (0.020±0.012)
MB160808 (0603)	1.6±0.2 (0.063±0.008)	0.8±0.2 (0.031±0.008)	0.8±0.2 (0.031±0.008)	0.5±0.3 (0.020±0.012)

## I PATR NUMBERING SYSTEM(品名規定)

<u>MB</u>	<u>45 32 15</u>	-	<u>B</u>	<u>310</u>	<u>□</u>
1	2		3	4	5
multilayer chip Bead	Dimensions A.B.C		Material Code	Normal Impedence	Packaging style
多層貼片磁珠	尺寸		材料代碼	標準阻抗	包裝類型 B=Bulk, T=Tape&Reel

## I MATERIAL CHARACTERISTIC

ITEM	UNIT		STANDARD VALUE		
Material Code	-	B	U	Z	G
Initial Permeability ( $\mu$ iac)	-	45	200	500	110
Maximum Permeability(mm)	-	125	450	900	250
Saturation Flux Density at 10 Oe	Gauss	2000	1400	1500	1700
Curie Temperature	°C	>200	>130	>100	>130
Volume Resistivity	$\Omega$ -m	$10^5$	$10^5$	$10^5$	$10^5$
Temperature Coefficient	$10^{-6}/^{\circ}\text{C}$	10	13	5	12
Density	$\text{g}/\text{cm}^3$	4.8	4.8	4.8	4.8

B Material: Standard type .for signal line application in which the blocking reging in near 100MHz .Impedence values selected for effectiveness at 10 to 300MHz.

U Material: For applications calling for low insertion low frequencies and sharply increasing impedance at high frequency. Designed for high impedance at high frequency for high speed signal line applications

Z Material: high frequency range type intended for the 100MHz regionand above. For signal line applications in which the sigal frequency is far from the cut off frequency. Impedence values selected for effectiveness at 40 to 400MHz

G Material: Designed as a noise countermeasure for the 200MHZ to 1GHZ range where the rise of the Z component is in the high frequency area.

B 材料：標準型，適用於頻率在 100MHz 附近之信號線，選擇作用頻率在 10~300MHz 間的阻值

U 材料：適用於需要在低頻時插入較低，在高頻時阻值急升之產品。此產品適用於在高頻亦高阻值之高速信號線之相關產品

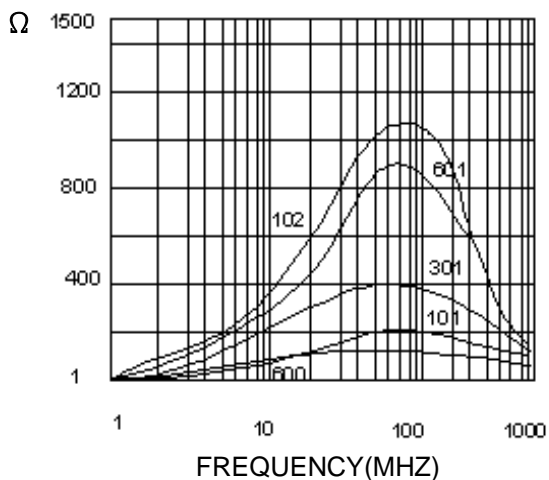
Z 材料：適用大于或等于 100MHz 之高頻範圍產品。適合信號頻率距離截止頻率較遠之信號線之相關產品，選擇作用品頻率介于 40 至 400MHz 之阻值

G 材料：适用于 200MHZ 至 1GHZ 高频段噪音阻抗器之阻抗元件。

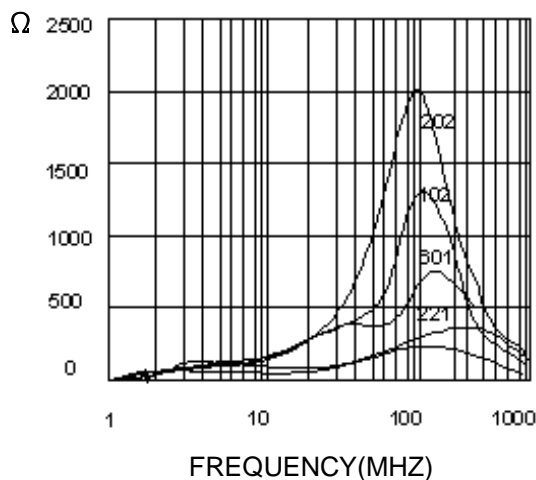


## I TYPICAL IMPEDANCE CHARACTERISTICS

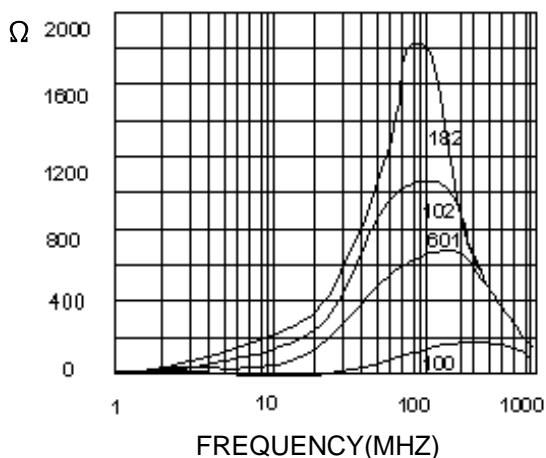
### B MATERIAL(B 材)



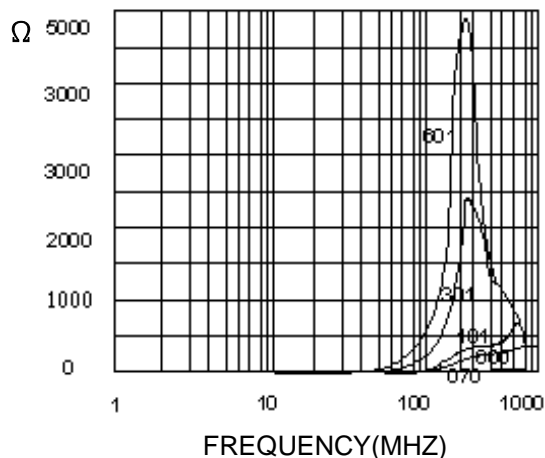
### U MATERIAL(U 材)



### Z MATERIAL(Z 材)



### G MATERIAL(G 材)



## I ELECTRICAL SPECIFICATION

PART NO.	IMPEDANCE (Ω) AT 100MHZ	DCRESISTANCE (Ω)MAX	RATED CURRENT (mA)MAX.
MB453215U131□	125±25%	0.4	300
MB453215Z131□	130±25%	0.4	300
MB453215U121□	120±25%	0.4	300
MB453215B700□	70±25%	0.4	300
MB451616U600□	60±25%	0.3	300

## I ELECTRICAL SPECIFICATION

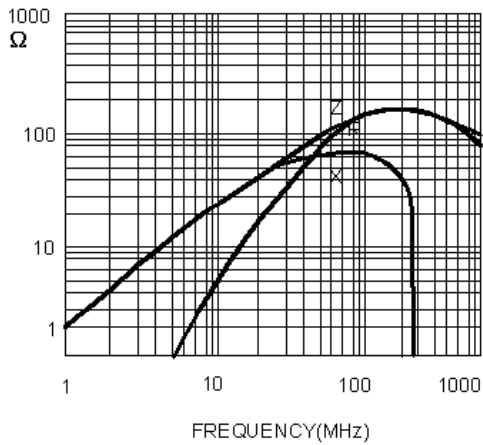
PART NO.	IMPEDANCE (Ω) AT 100MHZ	DCRESISTANCE (Ω)MAX	RATED CURRENT (mA)MAX.
MB451616Z520□	52±25%	0.3	300
MB451616B310□	31±25%	0.3	300
MB322513U600□	60±25%	0.3	400
MB322513Z520□	52±25%	0.3	400
MB322513B310□	31±25%	0.3	400
MB321616U500□	50±25%	0.5	200
MB321616Z700□	70±25%	0.5	200
MB321616U202□	2000±25%(AT30MHZ)	2.1	100
MB321616U122□	1200±25%(AT50MHZ)	1.6	100
MB321616U601□	600±25%	1.3	200
MB321616U310□	31±25%	0.2	500
MB321616Z601□	600±25%	1.3	200
MB321616Z260□	26±25%	0.2	500
MB321616B401□	400±25%	0.6	300
MB321616B221□	220±25%	0.5	300
MB321616B151□	150±25%	0.4	400
MB321616B121□	120±25%	0.4	400
MB321616B190□	19±25%	0.2	500
MB201209U102□	1000±25%	1.5	100
MB201209U601□	600±25%	1.3	100
MB201209U800□	80±25%	0.4	400
MB201209U170□	17±25%	0.2	500
MB201209U110□	11±25%	0.1	600
MB201209Z301□	300±25%	0.9	200
MB201209Z151□	150±25%	0.5	300
MB201209Z121□	120±25%	0.5	300
MB201209Z700□	70±25%	0.4	400
MB201209Z100□	10±25%	0.1	600
MB201209B070□	7±25%	0.1	600
MB201209U301□	300±25%	1.2	150
MB201209U221□	220±25%	1.0	150

□:MEANS PACKAGING STYLE

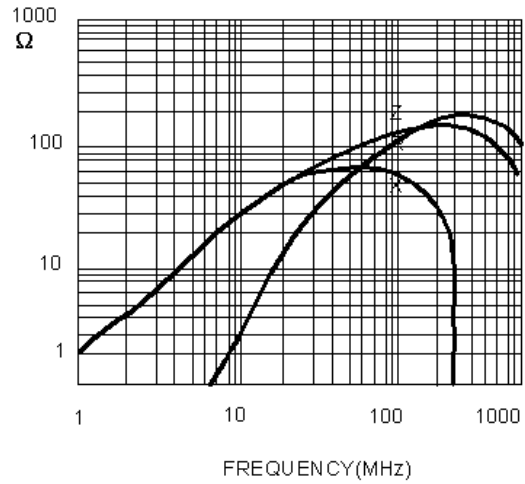


## I TYPICAL ELECTRICAL CHARACTERISTICS 典型電氣特性

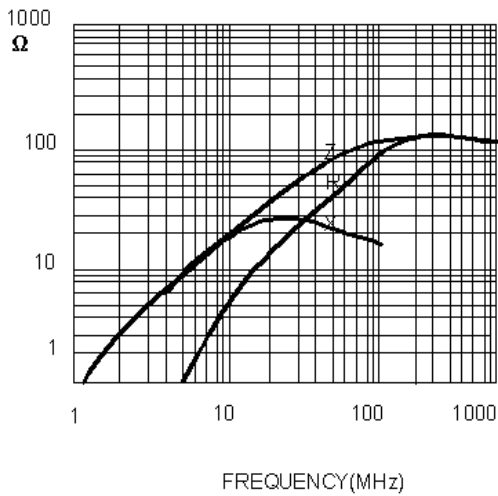
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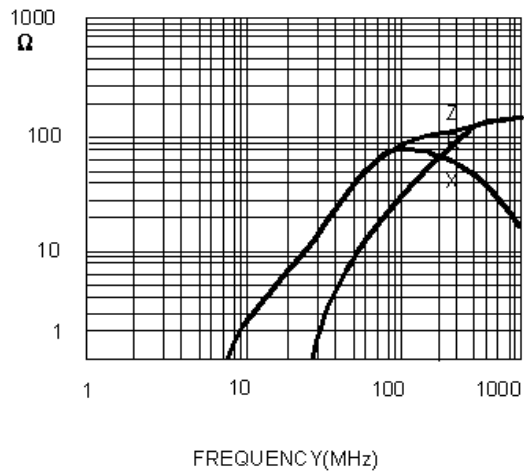
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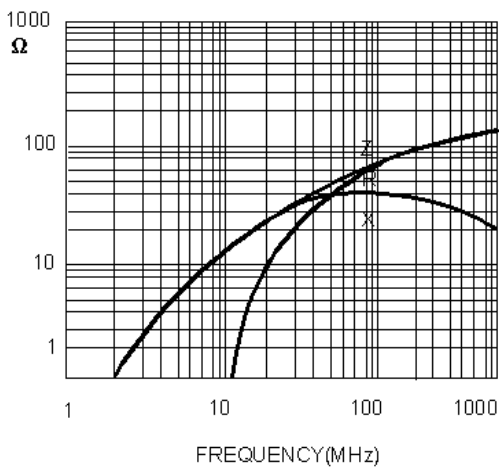
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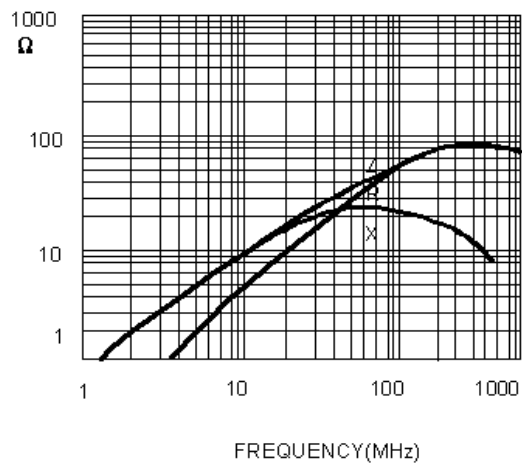
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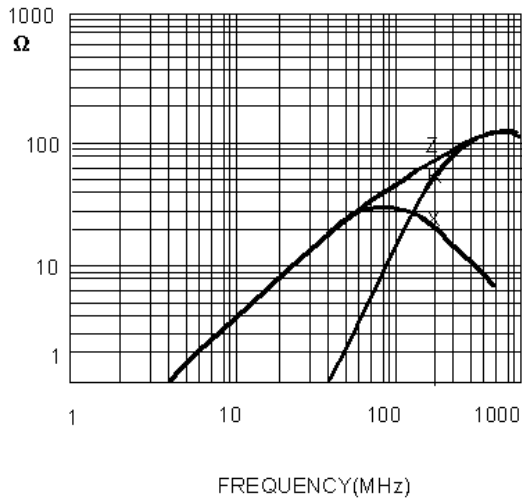


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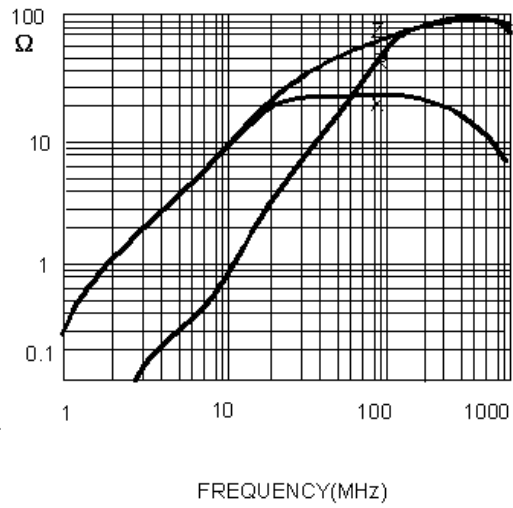


## I TYPICAL ELECTRICAL CHARACTERISTICS 典型電氣特性

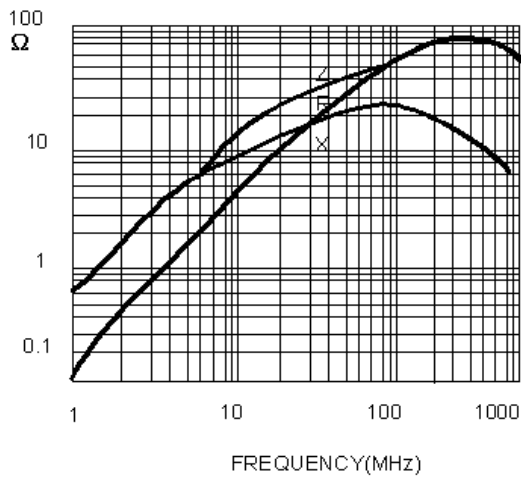
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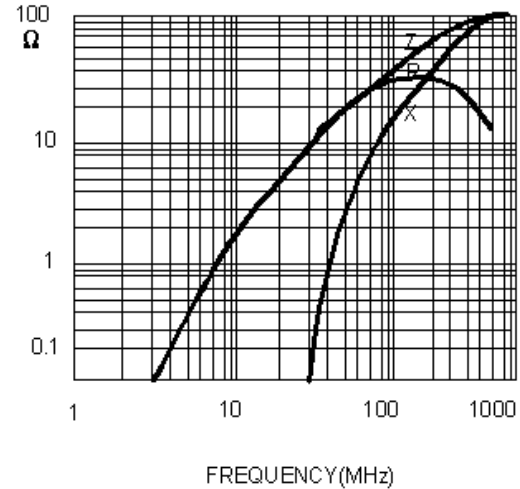
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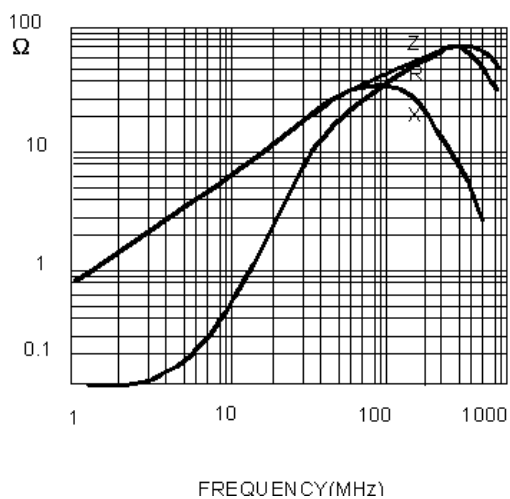
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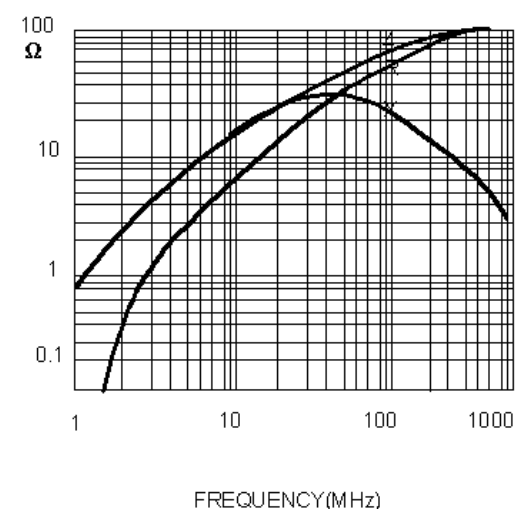
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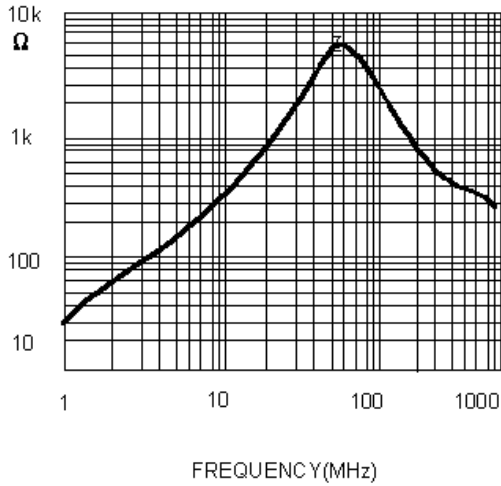


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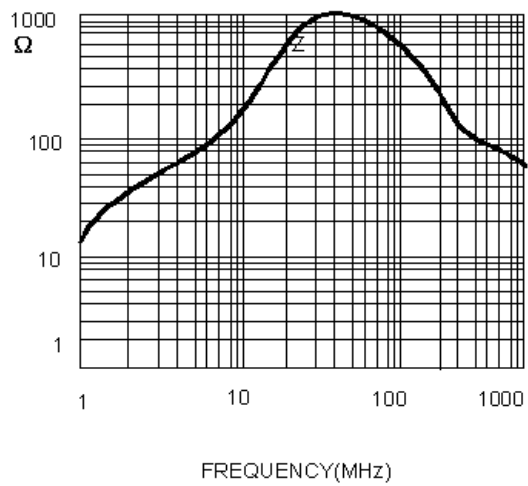


## I TYPICAL ELECTRICAL CHARACTERISTICS 典型電氣特性

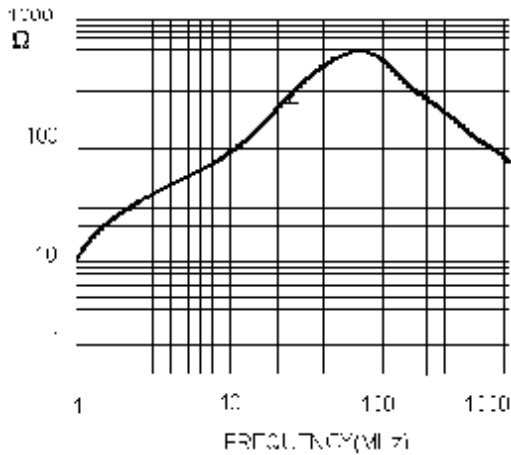
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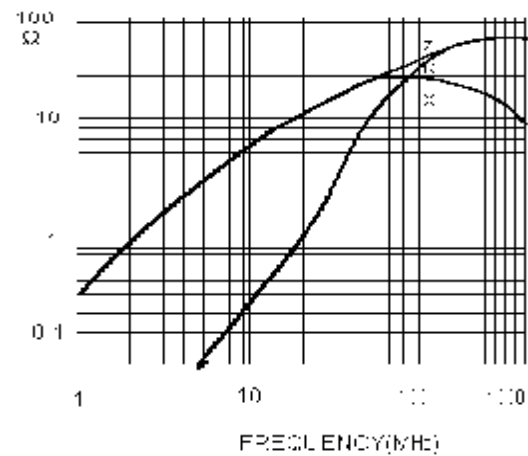
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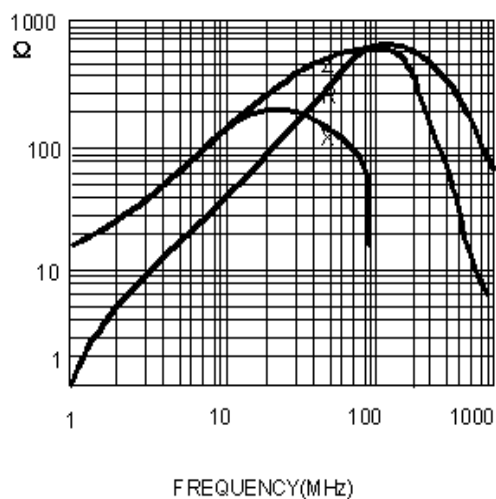
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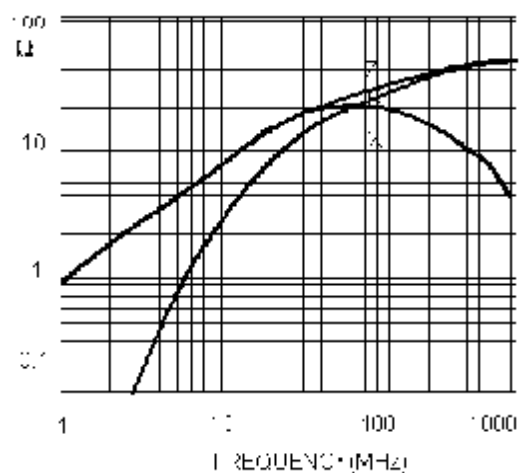
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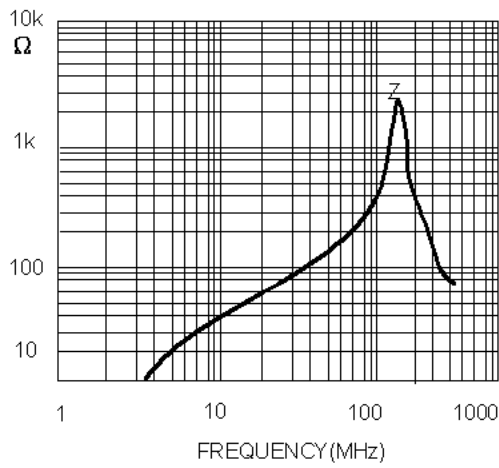


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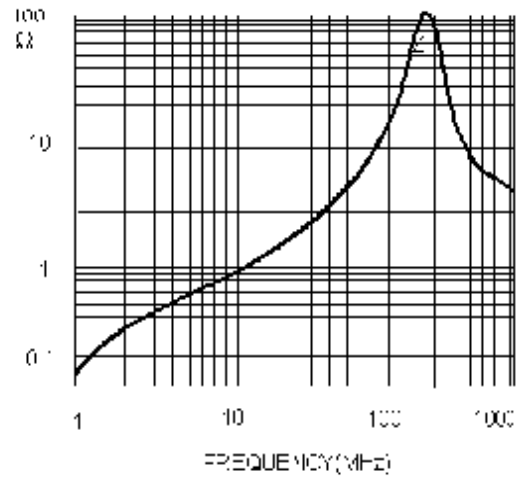


## I TYPICAL ELECTRICAL CHARACTERISTICS 典型電氣特性

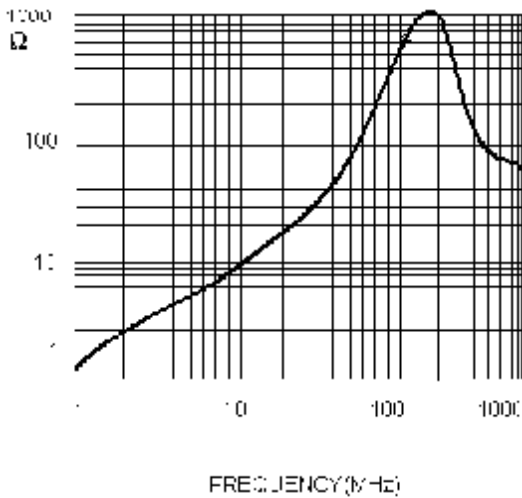
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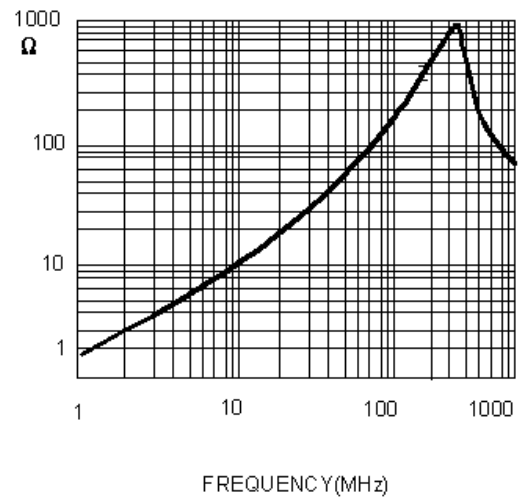
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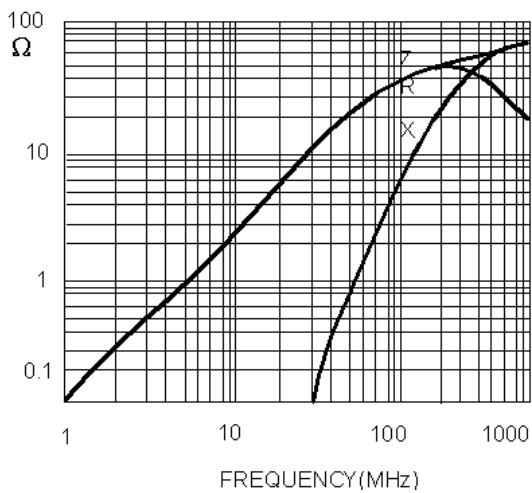
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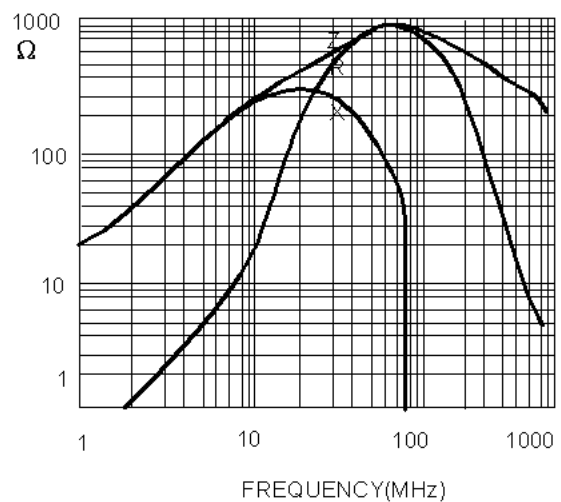
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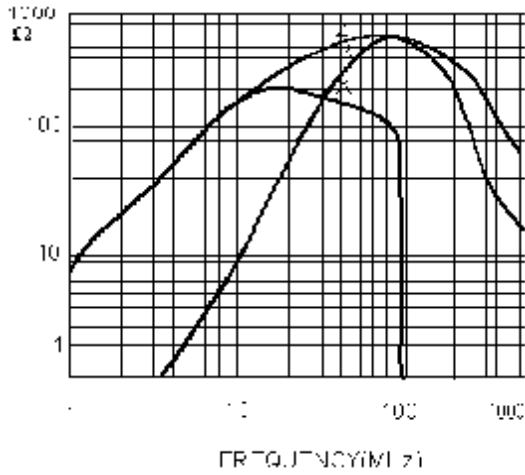
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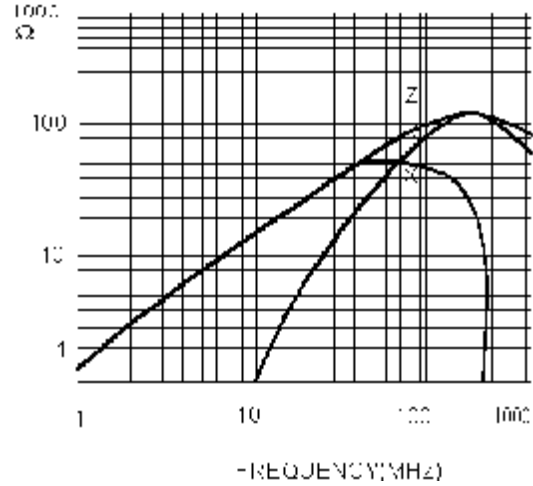


## I TYPICAL ELECTRICAL CHARACTERISTICS 典型電氣特性

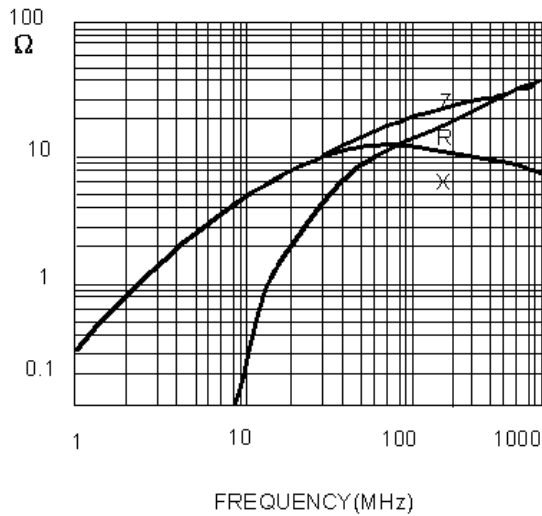
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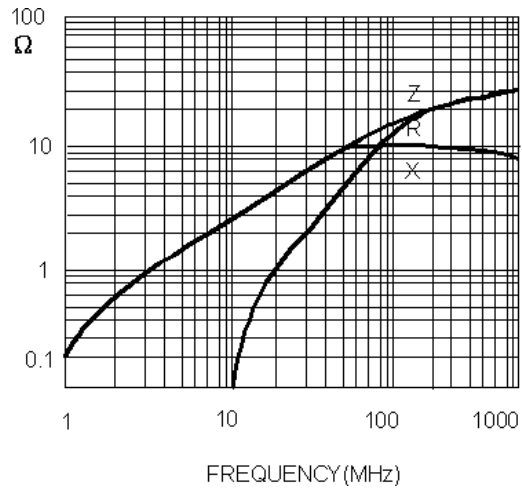
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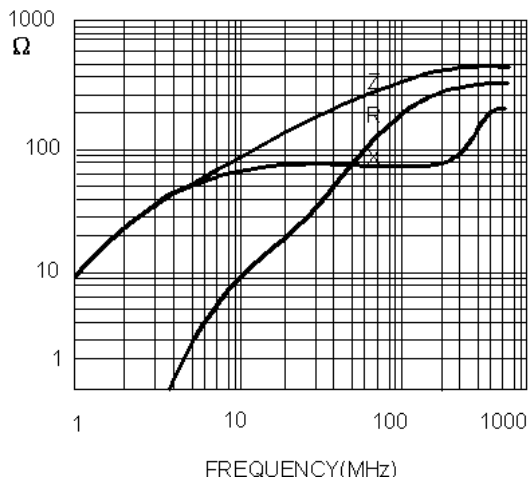
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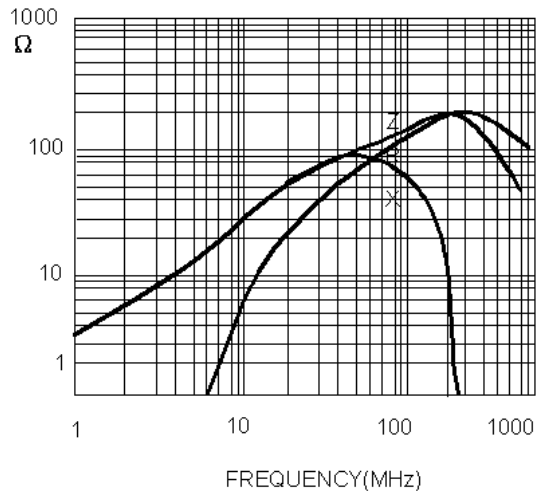
MB201209U110



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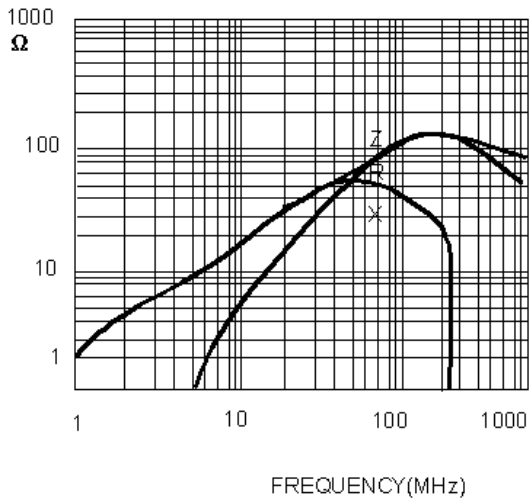


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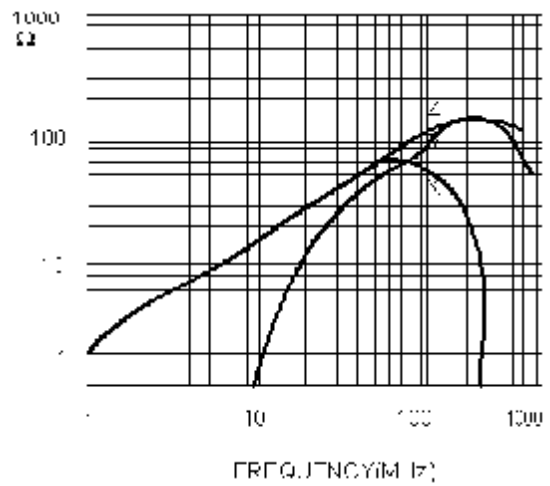


## I TYPICAL ELECTRICAL CHARACTERISTICS 典型電氣特性

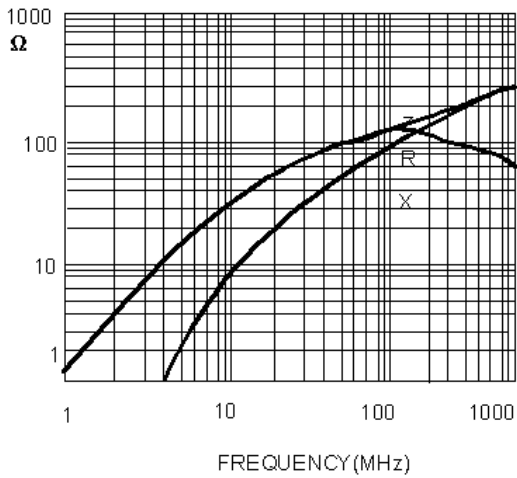
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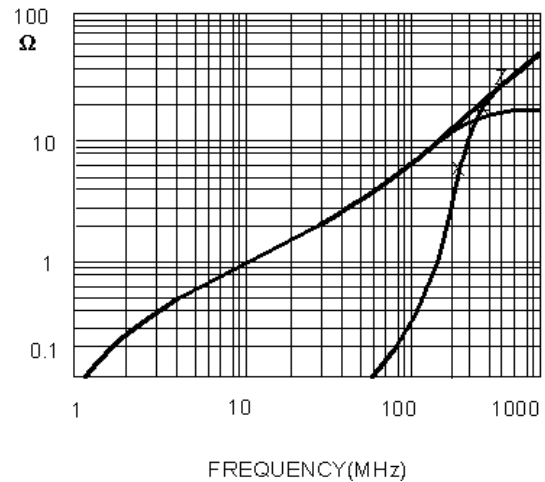
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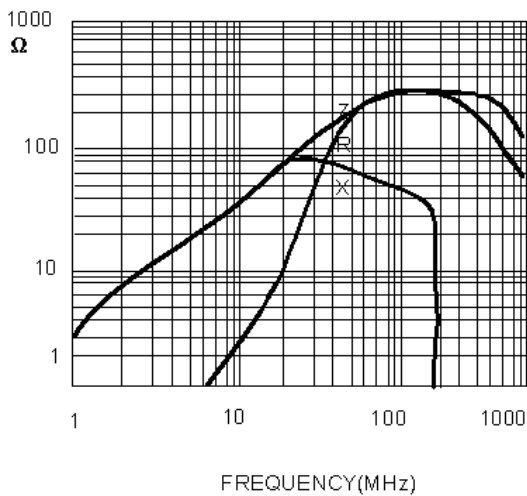
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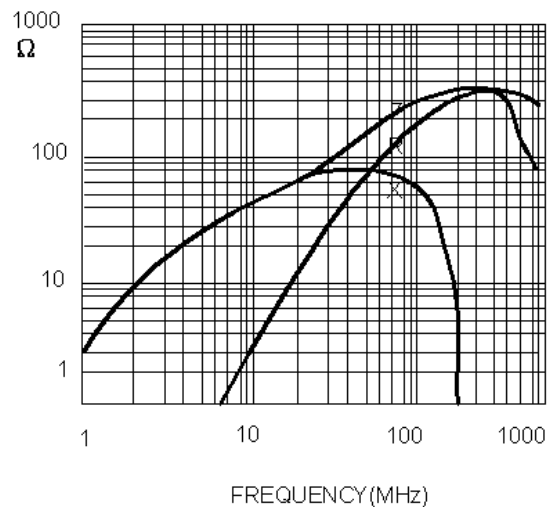
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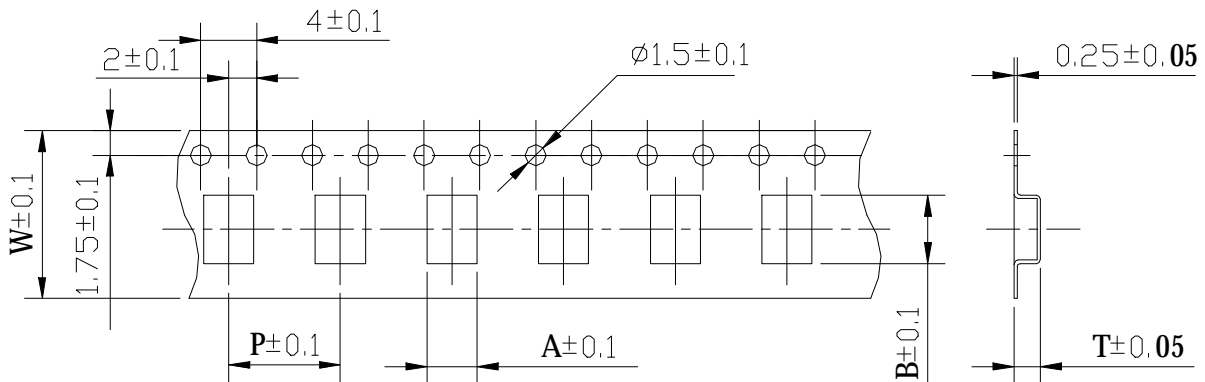
MB160808U301



MB160808U221



## ● PACKING

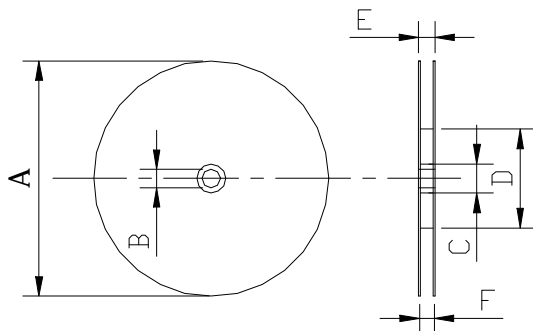


## 1. TAPE DIMENSIONS AND PACKING QUANTITY

TYPE	A	B	W	P	T	CHIPS/REEL
MB453215	3.6	4.9	12	8	1.9	1000
MB451616	1.9	4.9	12	4	2.0	2000
MB322513	2.9	3.6	8	4	1.7	2000
MB321616	1.9	3.5	8	4	2.0	2000
MB321611	1.9	3.5	8	4	1.5	3000
MB201209	1.5	2.3	8	4	1.3	4000
MB160808	1.1	1.9	8	4	1.1	4000

Material: Paper, Plastic

## 2. REEL DIMENSION



DIMENSION	W=8 mm	W=12mm
A	178±2	178±2
B	13.0±0.8	13.0±0.8
C	21.0±0.8	21.0±0.8
D	75	75
E	12.5	16.5
F	10.0	14.0