

# EMC Components

## Ferrite Beads

### SMD

## MMZ Series MMZ1005 Type

Size: JIS/IEC 1005, EIA 0402

### FEATURES

- Size standardized for use by automatic assembly equipment. No preferred orientation.
- Either flow or reflow soldering methods can be used due to electroplating of the terminal electrodes.
- High reliability due to an entirely monolithic structure.
- Closed magnetic circuit structure allows high-density installation while preventing crosstalk between circuits.
- Low DC resistance structure of electrode prevents wasteful electric power consumption.
- It is a product conforming to RoHS directive.

### APPLICATIONS

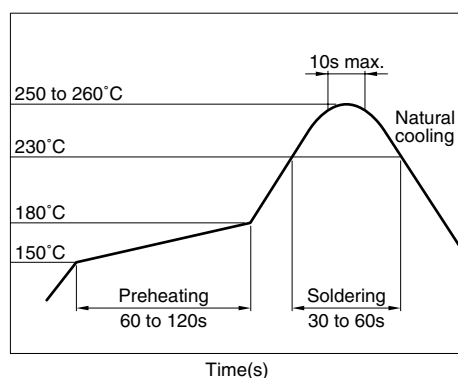
PCs, CRTs, liquid crystal display panels, printers, hard disk drives, game machines, cellular phones, etc.

### PRODUCT IDENTIFICATION

MMZ	1005	S	121	C	T
(1)	(2)	(3)	(4)	(5)	(6)

- (1) Series name
- (2) Dimensions L×W
- (3) Material code
- (4) Nominal impedance  
121:120Ω at 100MHz
- (5) Characteristic type
- (6) Packaging style  
T:Taping

### RECOMMENDED SOLDERING CONDITION REFLOW SOLDERING



### MATERIAL CHARACTERISTICS

**B material:** This type is perfectly suited for fast digital signals. By equalizing R components and X components that beads possess at a frequency of 5MHz, it is able to suppress overshooting, undershooting and ringing of fast digital signals.

**S material:** Standard type that features impedance characteristics similar to those of a typical ferrite core.

For signal line applications in which the blocking region is near 100MHz. Impedance values selected for effectiveness at 40 to 300MHz.

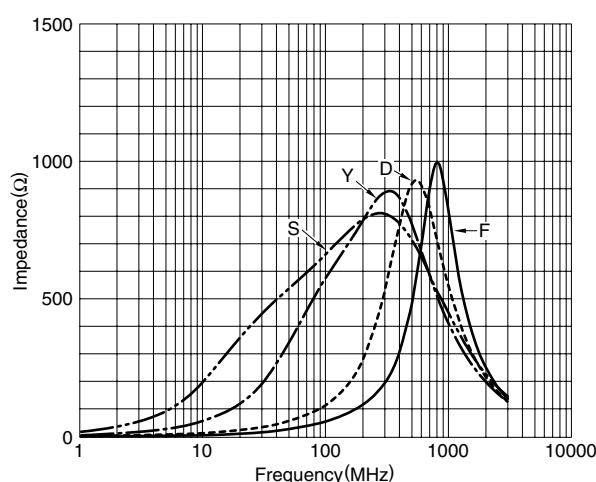
**Y material:** High frequency range type intended for the 100MHz region and above.

For signal line applications in which the signal frequency is far from the cutoff frequency. Impedance values selected for effectiveness at 80 to 400MHz.

**D material:** For applications calling for low insertion loss at low frequencies and sharply increasing impedance at high frequencies. Designed for high impedance at high frequencies (200 to 500MHz) for signal line applications.

**F material:** This new product inherits the characteristic of our D-material, namely its sharp impedance rise time, and its impedance peak frequency has been shifted higher into range. The product offers excellent noise suppression from 600MHz to as high as in the GHz range.

### TYPICAL MATERIAL CHARACTERISTICS



• **Conformity to RoHS Directive:** This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• Please contact our Sales office when your application are considered the following:  
The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

• All specifications are subject to change without notice.

# EMC Components

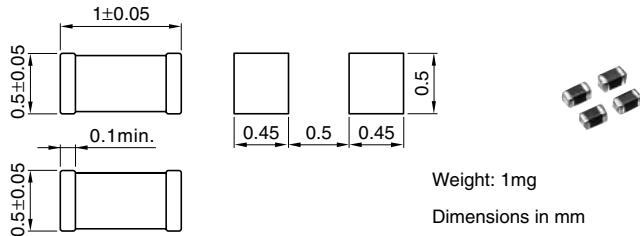
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### Size: JIS/IEC 1005, EIA 0402

## SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



## TEMPERATURE RANGES

Operating/storage  $-55$  to  $+125^\circ\text{C}$

## PACKAGING STYLE AND QUANTITIES

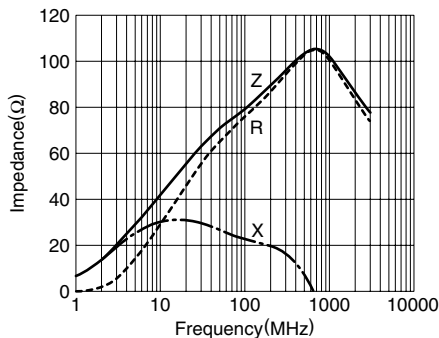
Packaging style Quantity  
Taping 10000 pieces/reel

## ELECTRICAL CHARACTERISTICS

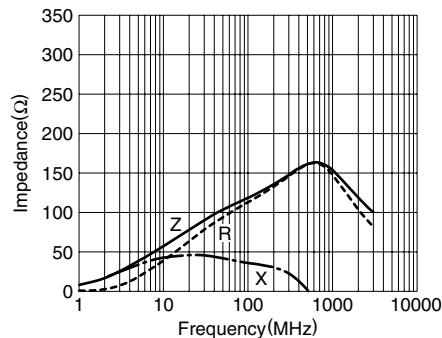
Part No.	Impedance ( $\Omega$ )[100MHz]	DC resistance ( $\Omega$ )max.	Rated current (mA)max.
MMZ1005B800C	$80 \pm 25\%$	0.2	450
MMZ1005B121C	$120 \pm 25\%$	0.25	400
MMZ1005B601C	$600 \pm 25\%$	0.85	200
MMZ1005S800C	$80 \pm 25\%$	0.2	500
MMZ1005S121C	$120 \pm 25\%$	0.25	500
MMZ1005S241C	$240 \pm 25\%$	0.4	400
MMZ1005S601C	$600 \pm 25\%$	0.6	300
MMZ1005S102C	$1000 \pm 25\%$	1	200
MMZ1005Y400C	$40 \pm 25\%$	0.12	550
MMZ1005Y800C	$80 \pm 25\%$	0.17	450
MMZ1005Y121C	$120 \pm 25\%$	0.21	400
MMZ1005Y241C	$240 \pm 25\%$	0.33	300
MMZ1005Y301C	$300 \pm 25\%$	0.38	250
MMZ1005Y471C	$470 \pm 25\%$	0.5	250
MMZ1005Y601C	$600 \pm 25\%$	0.56	250
MMZ1005Y102C	$1000 \pm 25\%$	0.74	200
MMZ1005Y152C	$1500 \pm 25\%$	1.15	100
MMZ1005A152E	$1500 \pm 25\%$	2	100
MMZ1005D100C	$10 \pm 5\Omega$	0.15	500
MMZ1005D220C	$22 \pm 25\%$	0.2	400
MMZ1005D330C	$33 \pm 25\%$	0.35	400
MMZ1005D680C	$68 \pm 25\%$	0.55	400
MMZ1005D121C	$120 \pm 25\%$	0.75	350
MMZ1005D241C	$240 \pm 25\%$	1.2	200
MMZ1005F330C	$33 \pm 25\%$	0.6	200
MMZ1005F470C	$47 \pm 25\%$	0.8	100
MMZ1005F560C	$56 \pm 25\%$	0.8	100

## TYPICAL ELECTRICAL CHARACTERISTICS Z, X, R vs. FREQUENCY CHARACTERISTICS

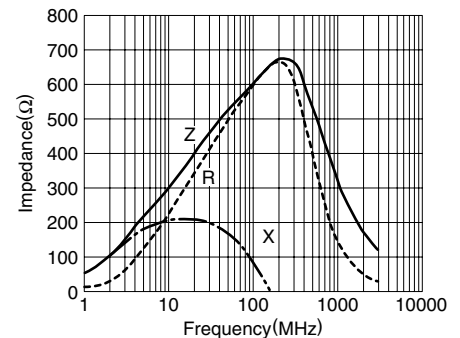
### MMZ1005B800C



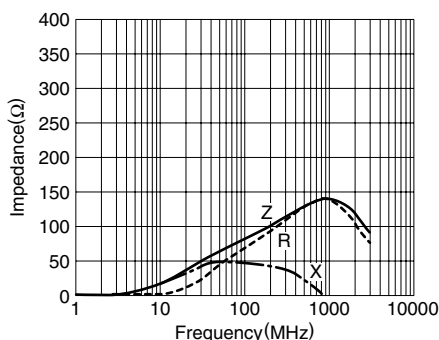
### MMZ1005B121C



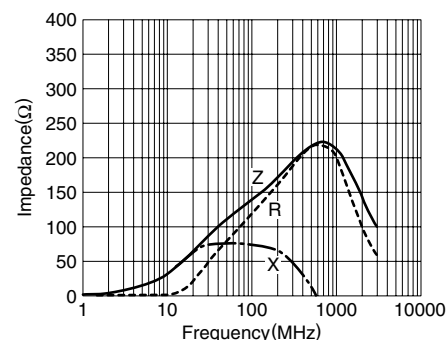
### MMZ1005B601C



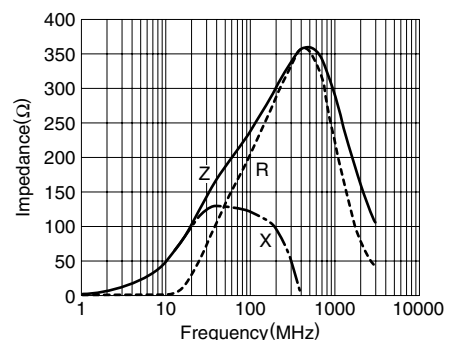
### MMZ1005S800C



### MMZ1005S121C



### MMZ1005S241C



# EMC Components

Ferrite Beads

SMD

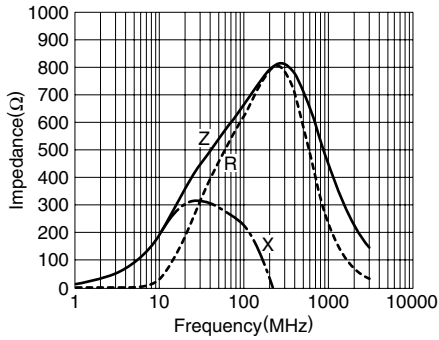
# MMZ Series MMZ1005 Type

Size: JIS/IEC 1005, EIA 0402

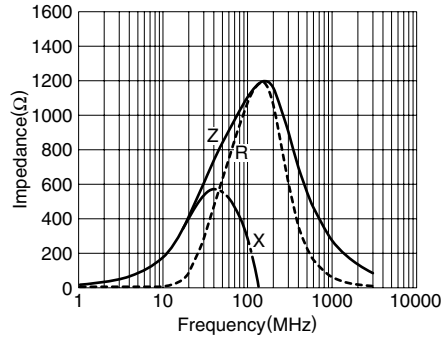
## TYPICAL ELECTRICAL CHARACTERISTICS

### Z, X, R vs. FREQUENCY CHARACTERISTICS

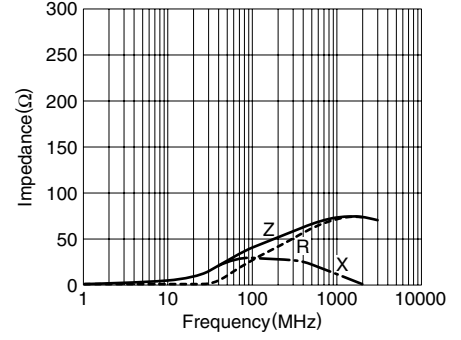
MMZ1005S601C



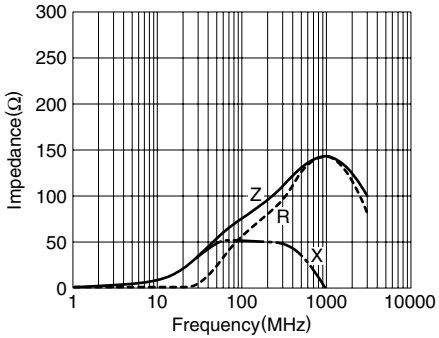
MMZ1005S102C



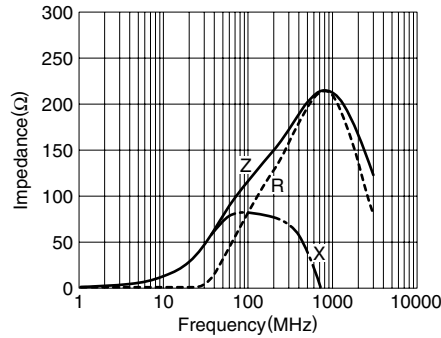
MMZ1005Y400C



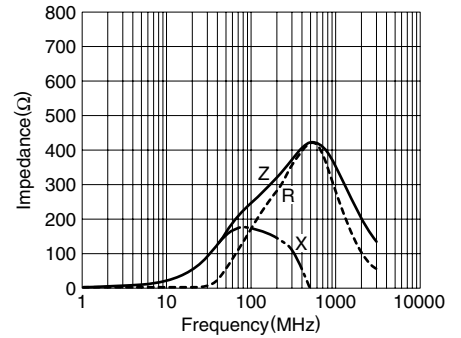
MMZ1005Y800C



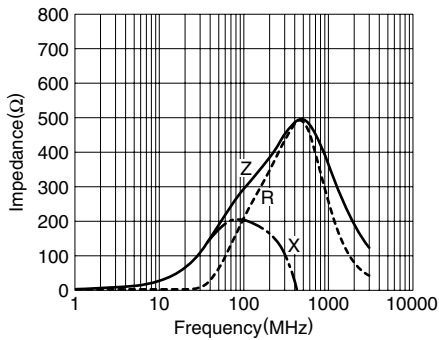
MMZ1005Y121C



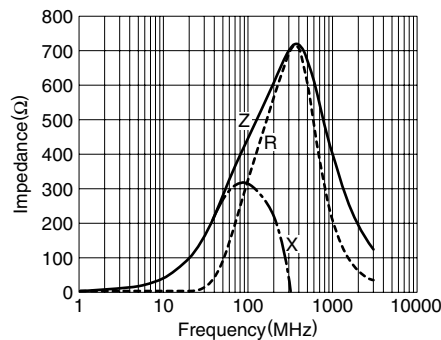
MMZ1005Y241C



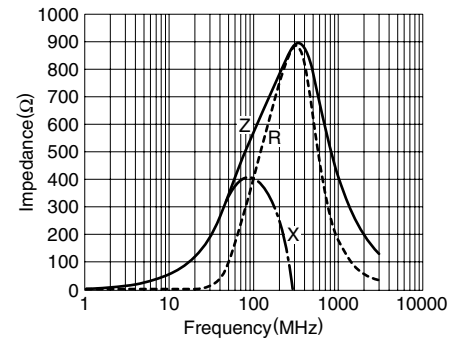
MMZ1005Y301C



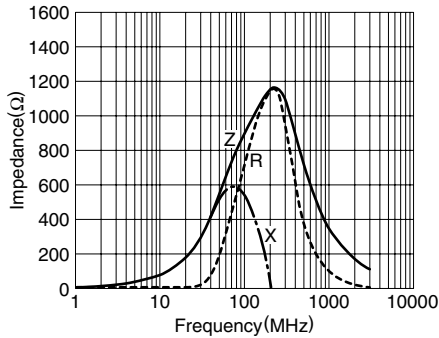
MMZ1005Y471C



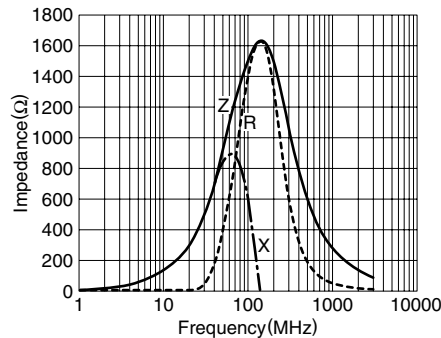
MMZ1005Y601C



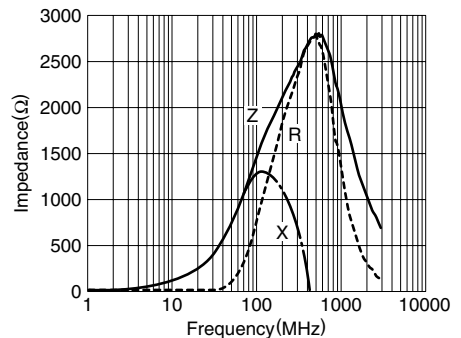
MMZ1005Y102C



MMZ1005Y152C



MMZ1005A152E



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SMD

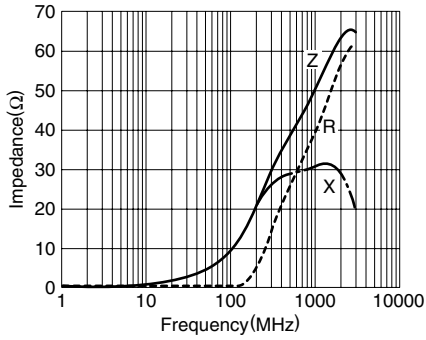
# MMZ Series MMZ1005 Type

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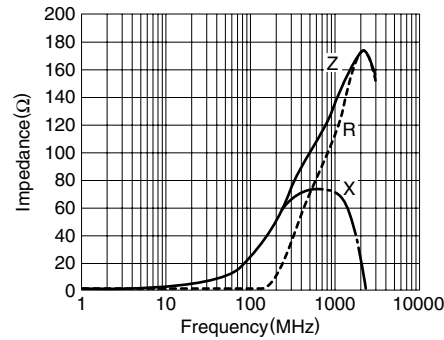
## TYPICAL ELECTRICAL CHARACTERISTICS

### Z, X, R vs. FREQUENCY CHARACTERISTICS

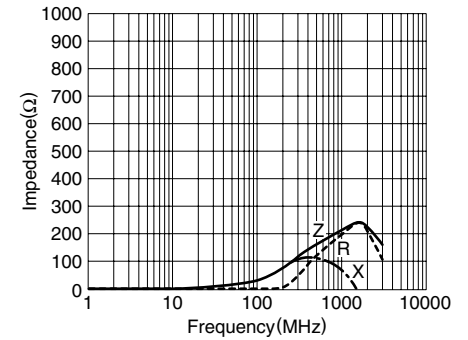
MMZ1005D100C



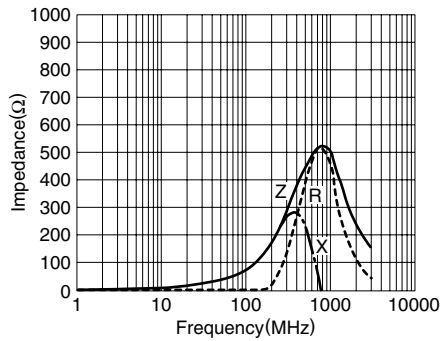
MMZ1005D220C



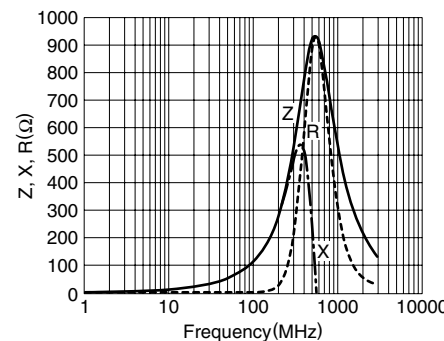
MMZ1005D330C



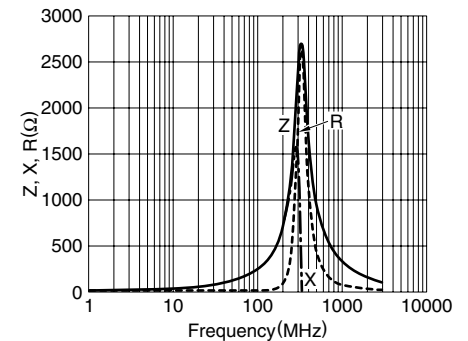
MMZ1005D680C



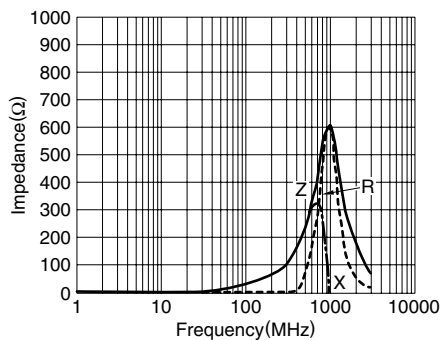
MMZ1005D121C



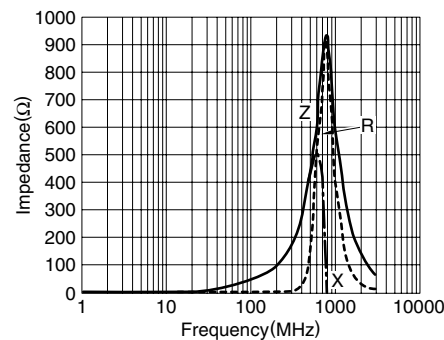
MMZ1005D241C



MMZ1005F330C



MMZ1005F470C



MMZ1005F560C

