

Chip beads
For general signal line
MMZ series



MMZ1608 type



FEATURES

- Noise reduction solution for general signal line.
- Various frequency characteristics with 8 materials of different features for countermeasures against everything from general signals to high-speed signals.
- Operating temperature range: -55 to +125°C

APPLICATION

- Noise removal for mobile devices such as smartphones and tablet terminals, and various modules.
- Noise removal for PCs and recorders, household appliances such as STBs, smart grids, and industrial equipment.

PART NUMBER CONSTRUCTION

MMZ	1608	S	121	A	T	A00
Series name	LxWxT dimensions 1.6x0.8x0.6 mm 1.6x0.8x0.8 mm	Material name	Impedance (Ω) at 100MHz	Characteristic type	Packaging style	Internal code

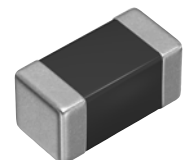
CHARACTERISTICS SPECIFICATION TABLE

Impedance [100MHz] (Ω)	DC resistance (Ω)max.	Rated current (mA)max.	Thickness T (mm)	Part No.	
120	$\pm 25\%$	0.15	600	0.6	MMZ1608B121CTAH0
220	$\pm 25\%$	0.25	500	0.6	MMZ1608B221CTAH0
300	$\pm 25\%$	0.25	500	0.6	MMZ1608B301CTAH0
470	$\pm 25\%$	0.30	500	0.6	MMZ1608B471CTAH0
600	$\pm 25\%$	0.40	500	0.6	MMZ1608B601CTAH0
1000	$\pm 25\%$	0.60	300	0.8	MMZ1608B102CTA00
15	$\pm 25\%$	0.05	1500	0.8	MMZ1608R150ATA00
30	$\pm 25\%$	0.05	1500	0.8	MMZ1608R300ATA00
60	$\pm 25\%$	0.10	800	0.8	MMZ1608R600ATA00
120	$\pm 25\%$	0.18	500	0.8	MMZ1608R121ATA00
300	$\pm 25\%$	0.25	500	0.8	MMZ1608R301ATA00
470	$\pm 25\%$	0.30	500	0.8	MMZ1608R471ATA00
600	$\pm 25\%$	0.40	500	0.8	MMZ1608R601ATA00
1000	$\pm 25\%$	0.50	400	0.8	MMZ1608R102ATA00

Measurement equipment

Measurement item	Product No.	Manufacturer
Impedance	E4991A+16192A	Keysight Technologies
DC resistance	Type-7556	Yokogawa

* Equivalent measurement equipment may be used.



MMZ1608 type

CHARACTERISTICS SPECIFICATION TABLE

Impedance [100MHz] (Ω)		DC resistance (Ω)max.	Rated current (mA)max.	Thickness T (mm)	Part No.
	Tolerance				
40	$\pm 25\%$	0.10	600	0.8	MMZ1608S400ATA00
80	$\pm 25\%$	0.15	500	0.8	MMZ1608S800ATA00
120	$\pm 25\%$	0.15	500	0.8	MMZ1608S121ATA00
180	$\pm 25\%$	0.20	500	0.8	MMZ1608S181ATA00
220	$\pm 25\%$	0.20	500	0.8	MMZ1608S221ATA00
300	$\pm 25\%$	0.30	500	0.8	MMZ1608S301ATA00
470	$\pm 25\%$	0.30	500	0.8	MMZ1608S471ATA00
600	$\pm 25\%$	0.35	500	0.8	MMZ1608S601ATA00
1000	$\pm 25\%$	0.50	400	0.8	MMZ1608S102ATA00
2000	$\pm 25\%$	0.90	200	0.8	MMZ1608S202ATA00
15	$\pm 25\%$	0.05	1500	0.8	MMZ1608Y150BTA00
30	$\pm 25\%$	0.05	1500	0.8	MMZ1608Y300BTA00
60	$\pm 25\%$	0.15	500	0.8	MMZ1608Y600BTA00
120	$\pm 25\%$	0.20	500	0.8	MMZ1608Y121BTA00
220	$\pm 25\%$	0.30	500	0.8	MMZ1608Y221BTA00
300	$\pm 25\%$	0.30	500	0.8	MMZ1608Y301BTA00
470	$\pm 25\%$	0.35	500	0.8	MMZ1608Y471BTA00
600	$\pm 25\%$	0.40	500	0.8	MMZ1608Y601BTA00
750	$\pm 25\%$	0.45	500	0.8	MMZ1608Y751BTA00
1000	$\pm 25\%$	0.50	400	0.8	MMZ1608Y102BTA00
1500	$\pm 25\%$	0.60	300	0.8	MMZ1608Y152BTA00
1800	$\pm 25\%$	0.80	200	0.8	MMZ1608A182BTA00
2200	$\pm 25\%$	0.80	200	0.8	MMZ1608A222BTA00
2500	$\pm 25\%$	0.80	200	0.8	MMZ1608A252BTA00
120	$\pm 25\%$	0.30	500	0.8	MMZ1608Q121BTA00
220	$\pm 25\%$	0.40	500	0.8	MMZ1608Q221BTA00
330	$\pm 25\%$	0.50	400	0.8	MMZ1608Q331BTA00
470	$\pm 25\%$	0.70	300	0.8	MMZ1608Q471BTA00
600	$\pm 25\%$	0.80	200	0.8	MMZ1608Q601BTA00
1000	$\pm 25\%$	1.00	200	0.8	MMZ1608Q102BTA00
5	$\pm 2\Omega$	0.05	700	0.8	MMZ1608D050CTA00
10	$\pm 5\Omega$	0.10	500	0.6	MMZ1608D100CTA00
22	$\pm 25\%$	0.20	500	0.6	MMZ1608D220CTA00
50	$\pm 25\%$	0.25	500	0.6	MMZ1608D500CTA00
80	$\pm 25\%$	0.30	500	0.6	MMZ1608D800CTA00
80	$\pm 25\%$	0.30	500	0.8	MMZ1608D800BTA00
120	$\pm 25\%$	0.30	400	0.6	MMZ1608D121CTA00
120	$\pm 25\%$	0.30	400	0.8	MMZ1608D121BTA00
240	$\pm 25\%$	0.60	300	0.8	MMZ1608D241CTA00
300	$\pm 25\%$	0.70	300	0.8	MMZ1608D301BTA00
3typ.		0.05	700	0.8	MMZ1608F030BTA00
47	$\pm 25\%$	0.40	500	0.8	MMZ1608F470BTA00
75	$\pm 25\%$	0.55	300	0.8	MMZ1608F750BTA00
120	$\pm 25\%$	0.75	200	0.8	MMZ1608F121BTA00

Measurement equipment

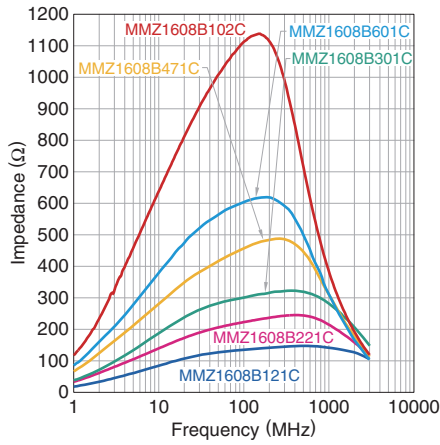
Measurement item	Product No.	Manufacturer
Impedance	E4991A+16192A	Keysight Technologies
DC resistance	Type-7556	Yokogawa

* Equivalent measurement equipment may be used.

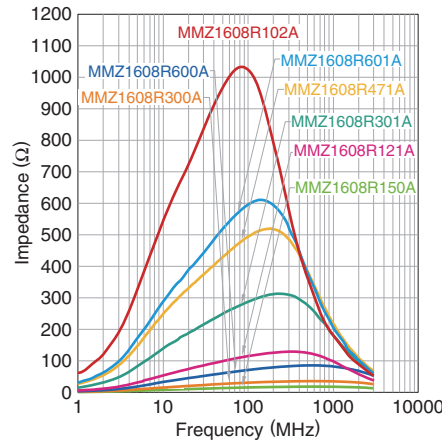
MMZ1608 type

Z VS. FREQUENCY CHARACTERISTICS (BY SERIES)

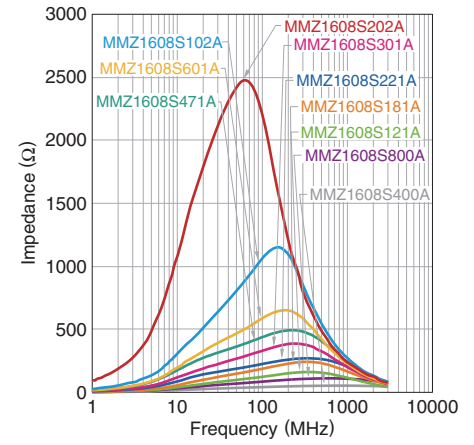
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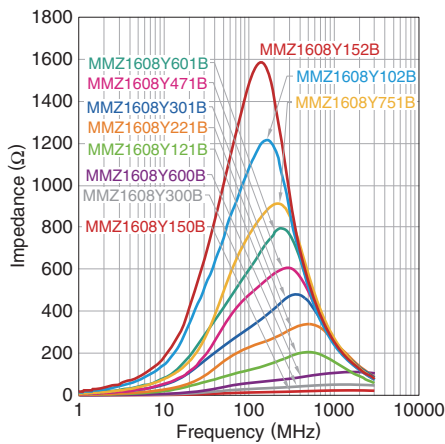
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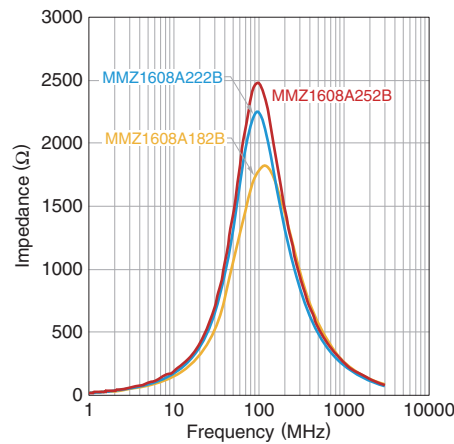
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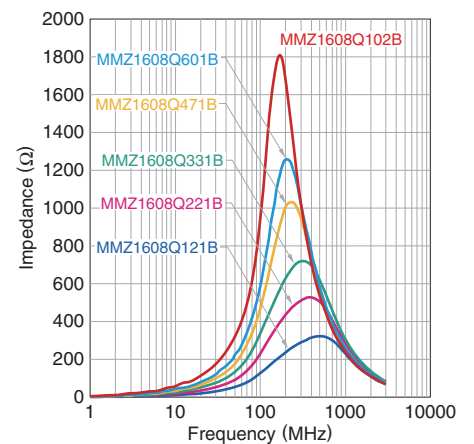
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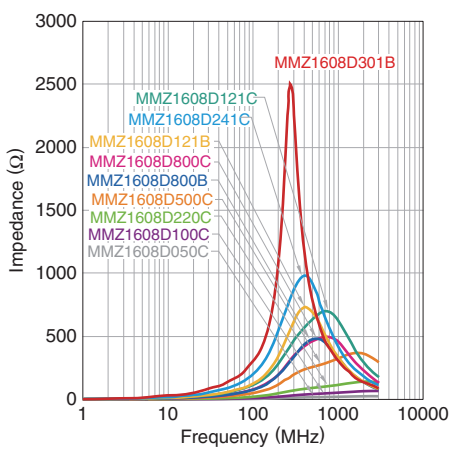
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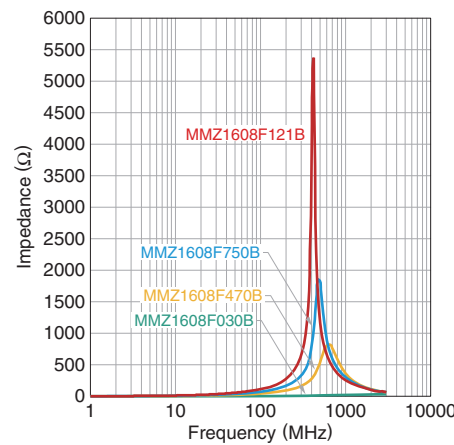
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MMZ1608D series



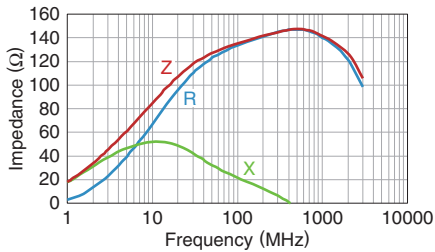
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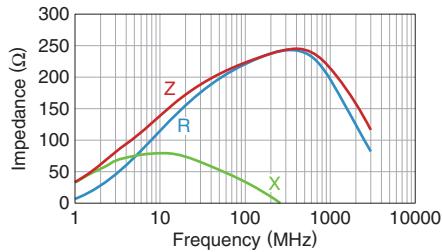
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Z, X, R VS. FREQUENCY CHARACTERISTICS

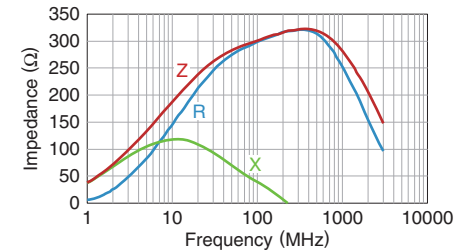
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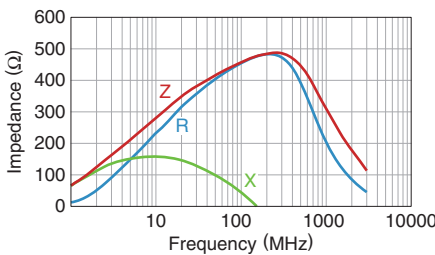
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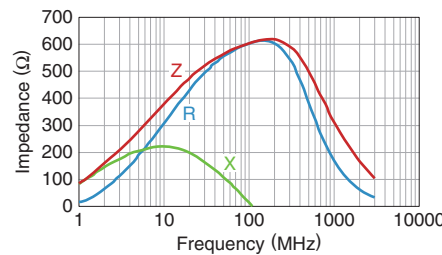
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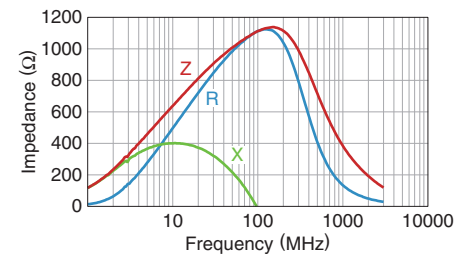
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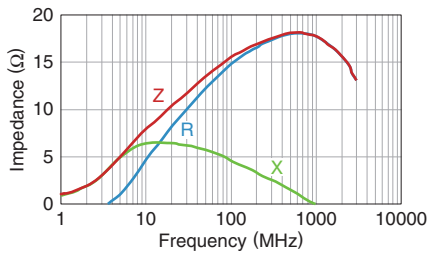
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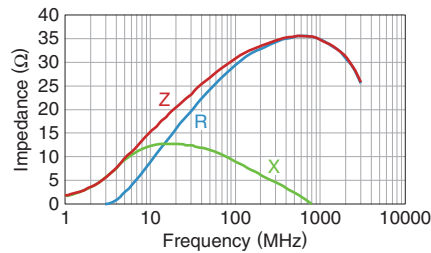
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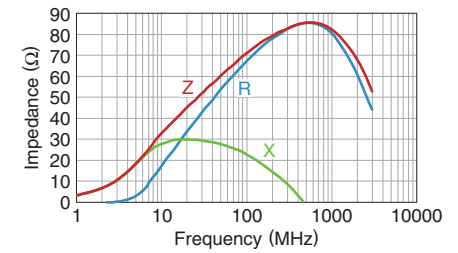
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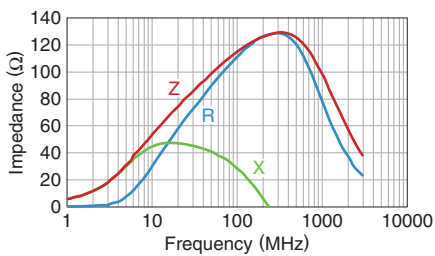
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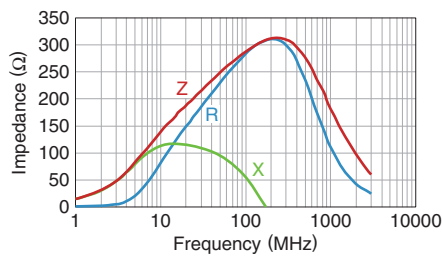
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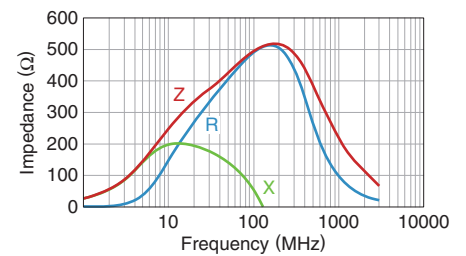
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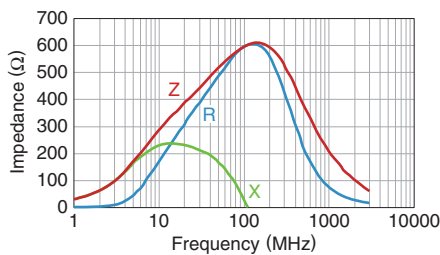
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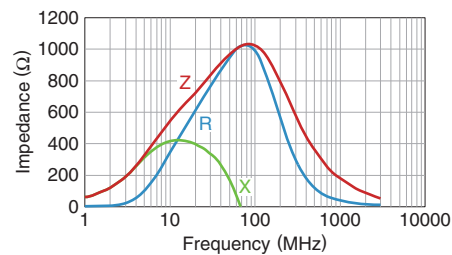
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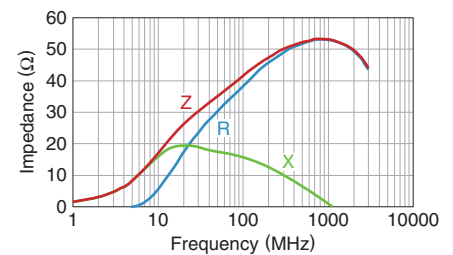
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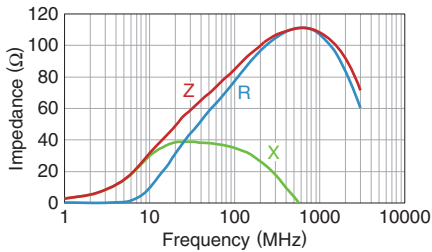
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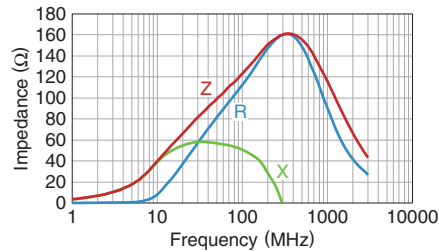
MMZ1608 type

Z, X, R VS. FREQUENCY CHARACTERISTICS

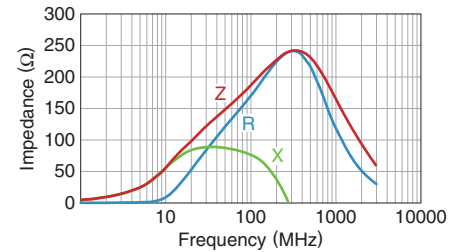
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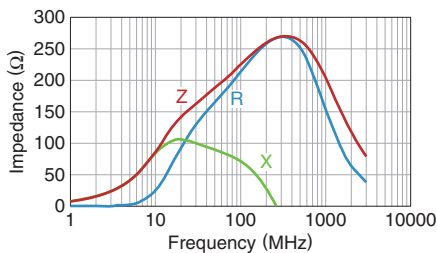
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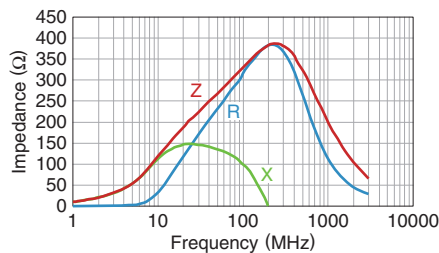
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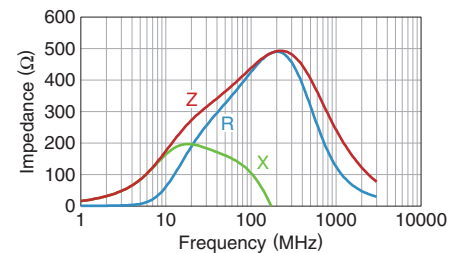
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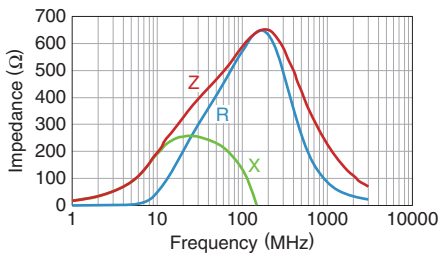
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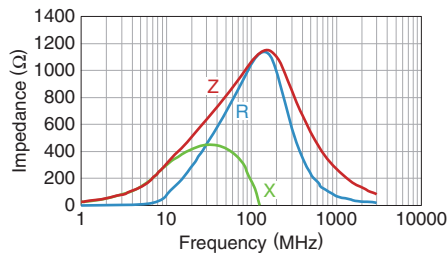
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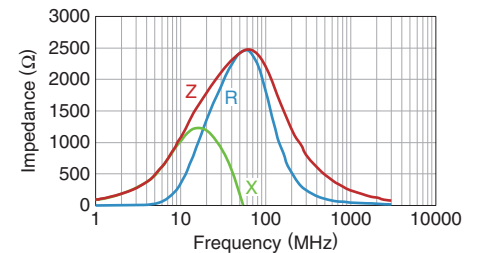
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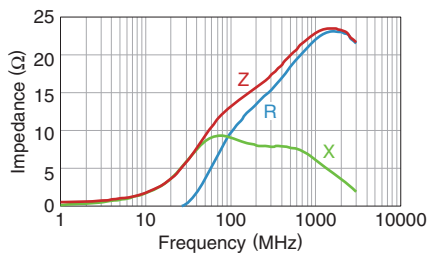
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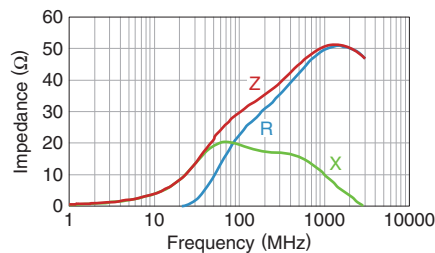
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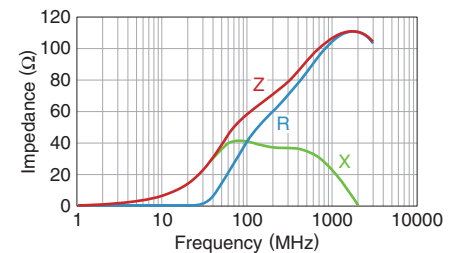
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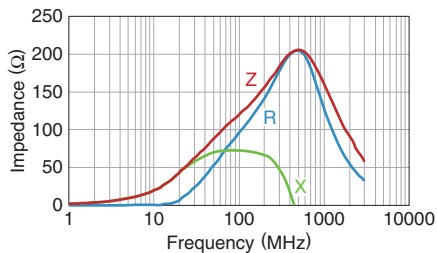
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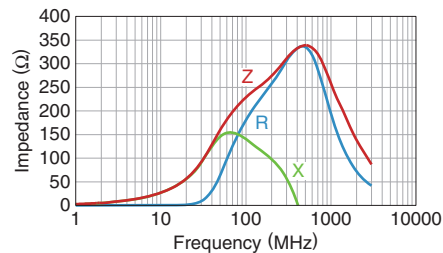
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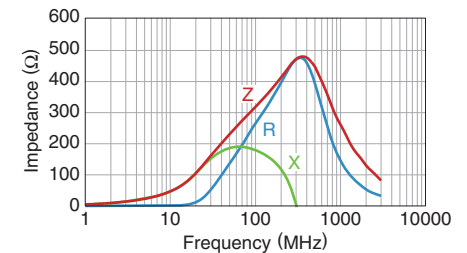
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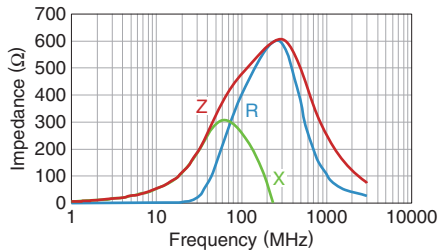
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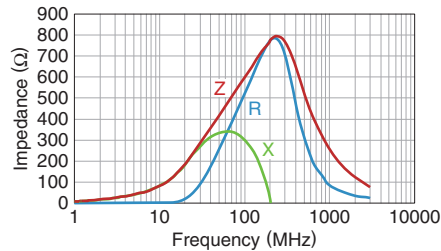
MMZ1608 type

Z, X, R VS. FREQUENCY CHARACTERISTICS

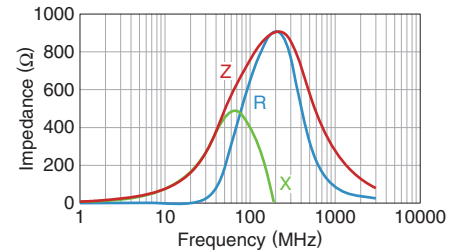
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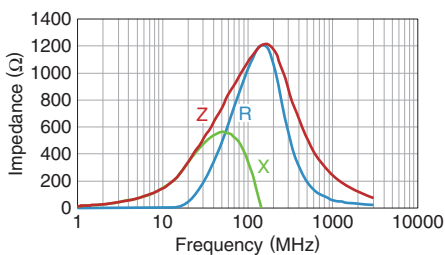
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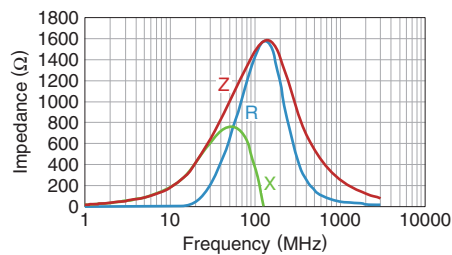
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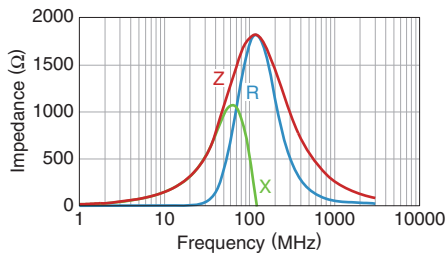
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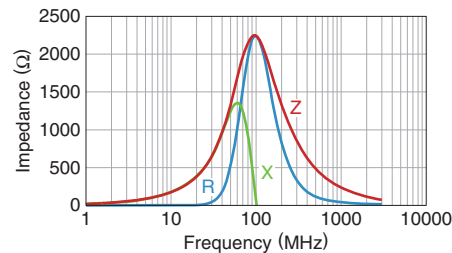
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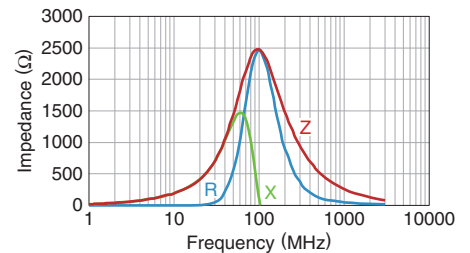
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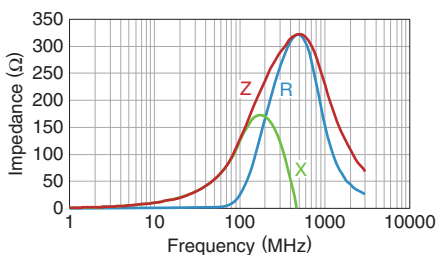
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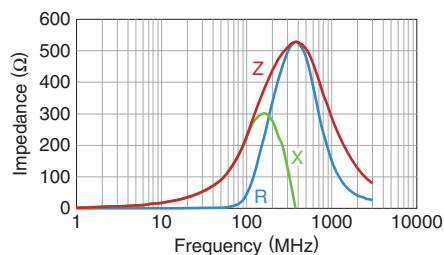
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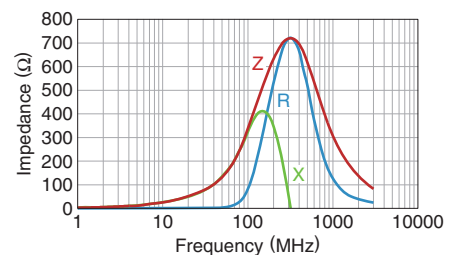
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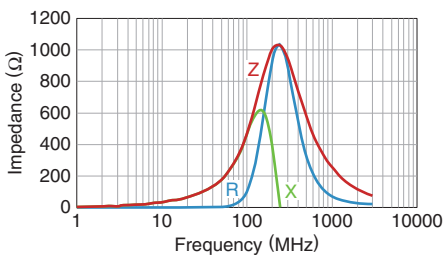
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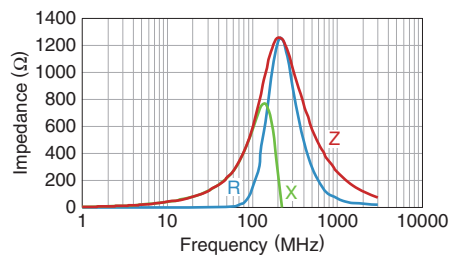
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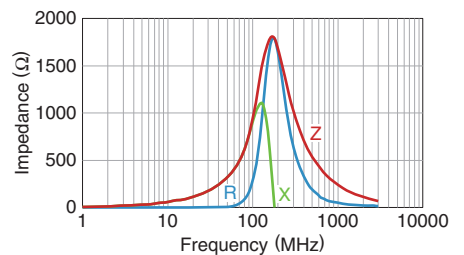
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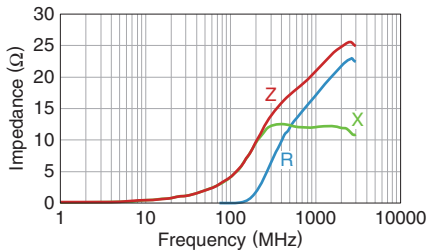
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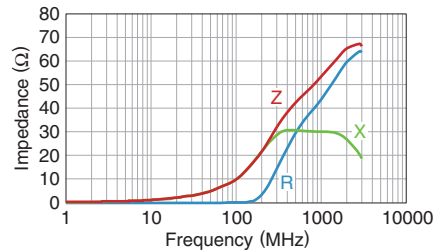
MMZ1608 type

Z, X, R VS. FREQUENCY CHARACTERISTICS

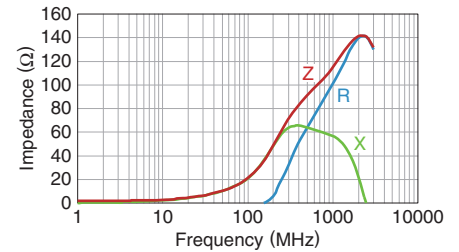
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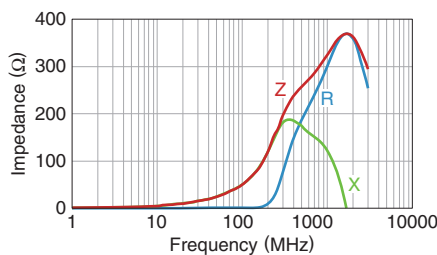
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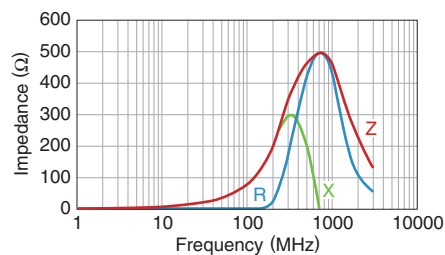
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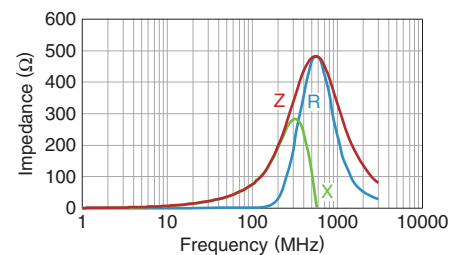
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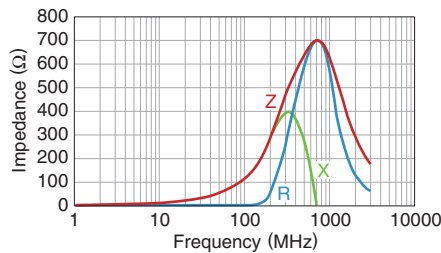
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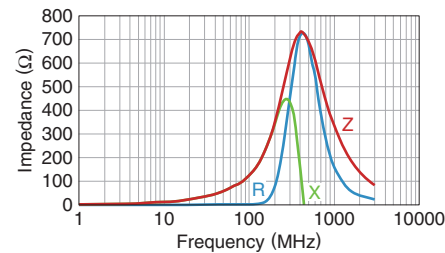
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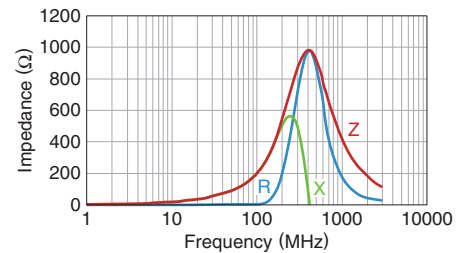
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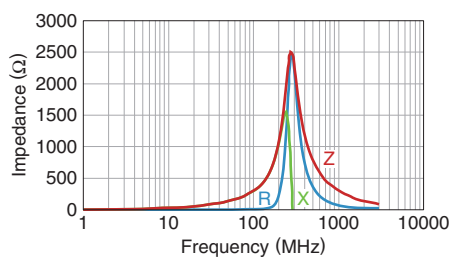
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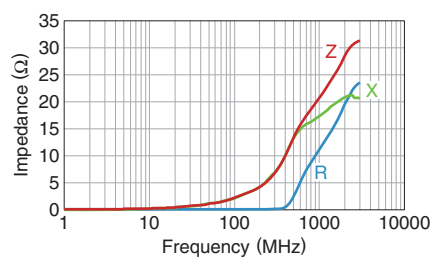
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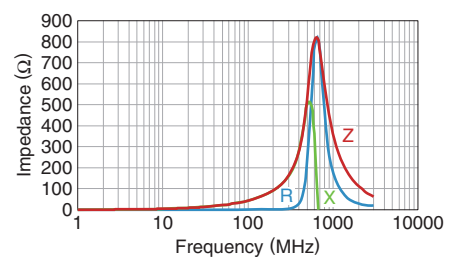
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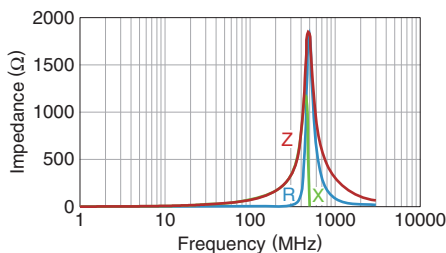
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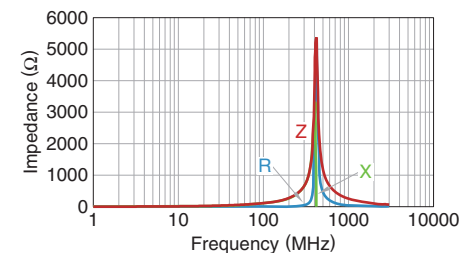
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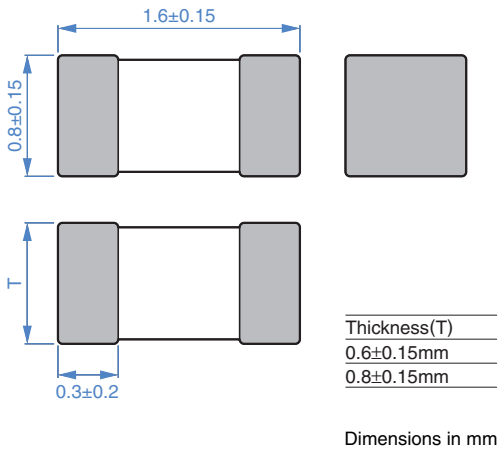


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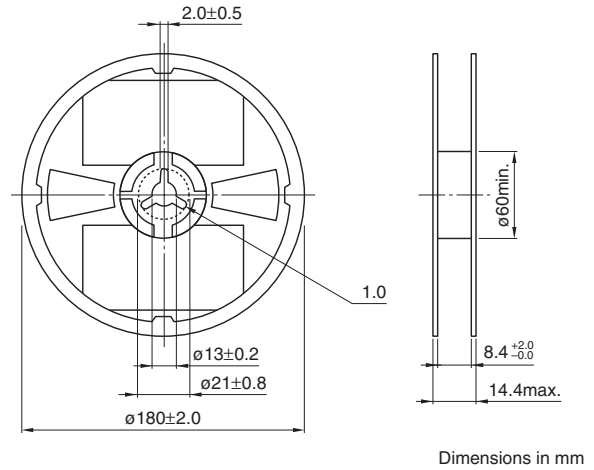
MMZ1608 type

SHAPE & DIMENSIONS

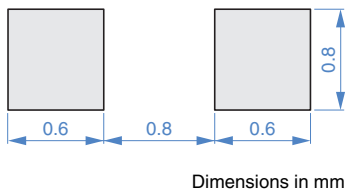


PACKAGING STYLE

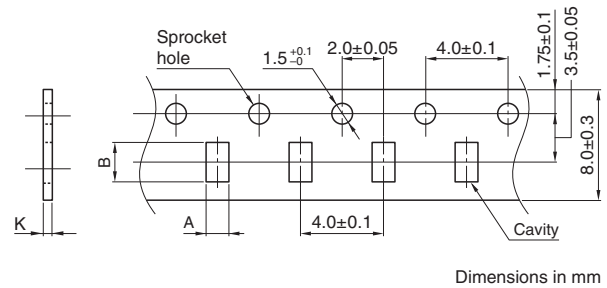
REEL DIMENSIONS



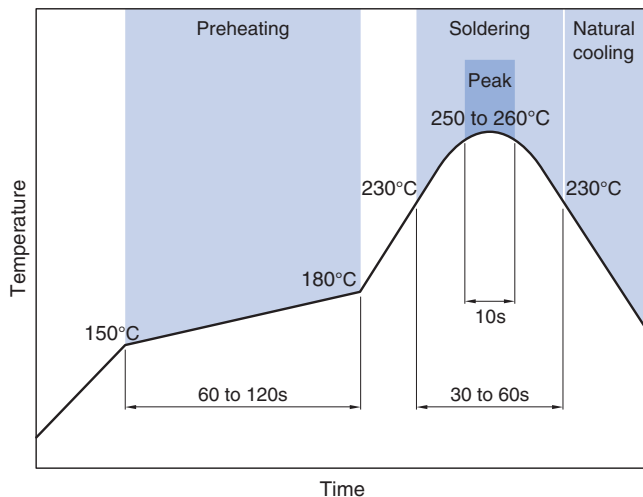
RECOMMENDED LAND PATTERN



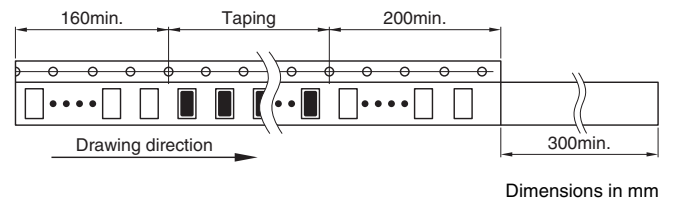
TAPE DIMENSIONS



RECOMMENDED REFLOW PROFILE



Type	A	B	K
MMZ1608	1.1±0.2	1.9±0.2	1.1max.



PACKAGE QUANTITY

Package quantity	4,000 pcs/reel
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TEMPERATURE RANGE, INDIVIDUAL WEIGHT

Type	Operating temperature range	Storage temperature range*	Individual weight
t=0.6mm	-55 to +125°C	-55 to +125°C	3 mg
t=0.8mm	-55 to +125°C	-55 to +125°C	4 mg

* The storage temperature range is for after the assembly.

REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using this products.

REMINDERS

- The storage period is within 12 months. Be sure to follow the storage conditions (temperature: 5 to 40°C, humidity: 10 to 75% RH or less).
If the storage period elapses, the soldering of the terminal electrodes may deteriorate.
- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications.
If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- Carefully lay out the coil for the circuit board design of the non-magnetic shield type.
A malfunction may occur due to magnetic interference.
- Use a wrist band to discharge static electricity in your body through the grounding wire.
- Do not expose the products to magnets or magnetic fields.
- Do not use for a purpose outside of the contents regulated in the delivery specifications.
- The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.
The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.
If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.

- (1) Aerospace/aviation equipment
- (2) Transportation equipment (cars, electric trains, ships, etc.)
- (3) Medical equipment
- (4) Power-generation control equipment
- (5) Atomic energy-related equipment
- (6) Seabed equipment
- (7) Transportation control equipment

- (8) Public information-processing equipment
- (9) Military equipment
- (10) Electric heating apparatus, burning equipment
- (11) Disaster prevention/crime prevention equipment
- (12) Safety equipment
- (13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.