

# Chip Beads(SMD) For Power Line

Conformity to RoHS Directive

## MPZ Series MPZ1608 Type

TDK has manufactured MPZ2012 type as EMI countermeasure product for power line, and now maximizes impedance to  $600\Omega$  (at 100MHz) and rated current to 1A, while minimizes Rdc under  $150m\Omega$  as 1608 type.

### FEATURES

- This type is the best for energy-saving in the low DC resistance.
- The products contain no lead and also support lead-free soldering.
- It is a product conforming to RoHS directive.

### APPLICATIONS

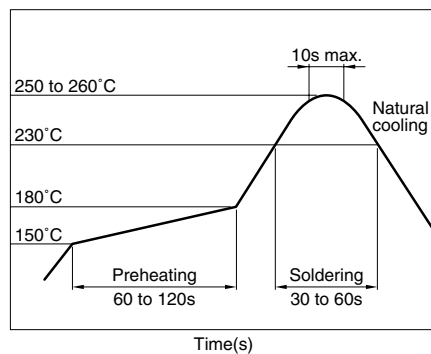
Noise suppression of personal computers, USB/IEEE1394 interfaces, HDDs, CD-ROMs, DVDs, DSCs, LCD panels, cellular phones, etc.

### PRODUCT IDENTIFICATION

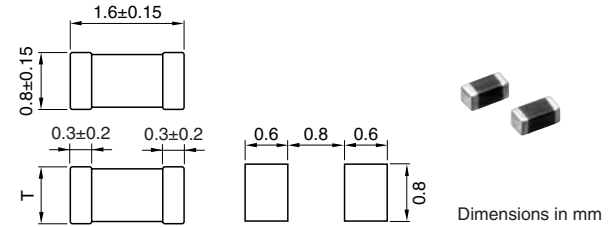
MPZ	1608	S	221	A	T
(1)	(2)	(3)	(4)	(5)	(6)

- (1) Series name  
 (2) Dimensions L×W  
 (3) Material code  
 (4) Nominal impedance  
 221:  $220\Omega$  at 100MHz  
 (5) Characteristic type  
 (6) Packaging style  
 T: Taping

### RECOMMENDED SOLDERING CONDITION REFLOW SOLDERING



### SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



Thickness(T)	Weight
$0.6\pm 0.15\text{mm}$	3mg
$0.8\pm 0.15\text{mm}$	4mg

### TEMPERATURE RANGES

Operating/storage	-55 to +125°C
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### PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	4000 pieces/reel

### HANDLING AND PRECAUTIONS

- Before soldering, be sure to preheat components. The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed  $150^\circ\text{C}$ .
- After mounting components onto the printed circuit board, do not apply stress through board bending or mishandling.
- The inductance value may change due to magnetic saturation if the current exceeds the rated maximum.
- Do not expose the inductors to stray magnetic fields.
- Avoid static electricity discharge during handling.
- When hand soldering, apply the soldering iron to the printed circuit board only. Temperature of the iron tip should not exceed  $350^\circ\text{C}$ . Soldering time should not exceed 3 seconds.

• 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.

## ELECTRICAL CHARACTERISTICS

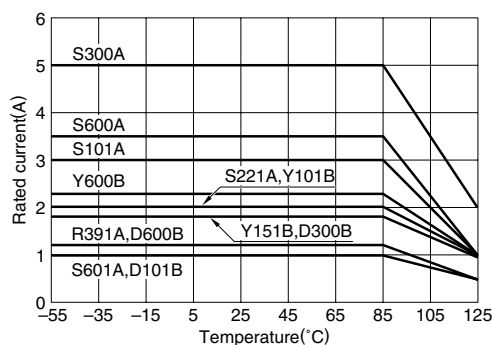
Part No.	Impedance ( $\Omega$ )[100MHz] <sup>*1</sup>	DC resistance ( $\Omega$ )max.	Rated current <sup>*2</sup> (A)max.	Thickness T(mm)
MPZ1608S300A	30 $\pm$ 10 $\Omega$	0.01	5	0.6
MPZ1608S600A	60 $\pm$ 25%	0.02	3.5	0.6
MPZ1608S101A	100 $\pm$ 25%	0.03	3	0.6
MPZ1608S221A	220 $\pm$ 25%	0.05	2	0.8
MPZ1608R391A	390 $\pm$ 25%	0.12	1.2	0.8
MPZ1608S601A	600 $\pm$ 25%	0.15	1	0.8
MPZ1608Y600B	60 $\pm$ 25%	0.03	2.3	0.8
MPZ1608Y101B	100 $\pm$ 25%	0.05	2.0	0.8
MPZ1608Y151B	150 $\pm$ 25%	0.07	1.8	0.8
MPZ1608D300B	30 $\pm$ 10 $\Omega$	0.07	1.8	0.8
MPZ1608D600B	60 $\pm$ 25%	0.12	1.2	0.8
MPZ1608D101B	100 $\pm$ 25%	0.15	1.0	0.8

\*1 Test equipment: E4991A or equivalent

Test tool: 16192A or equivalent

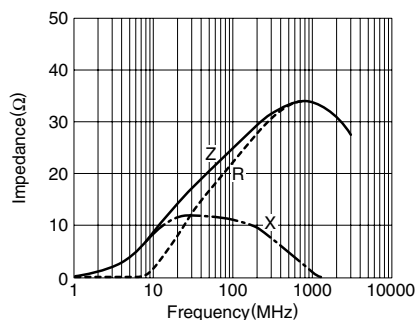
\*2 Please refer to the graph of RATED CURRENT vs. TEMPERATURE CHARACTERISTICS(DERATING) about the rating current at 85°C or more in temperature of the product.

## RATED CURRENT vs. TEMPERATURE CHARACTERISTICS (DERATING)

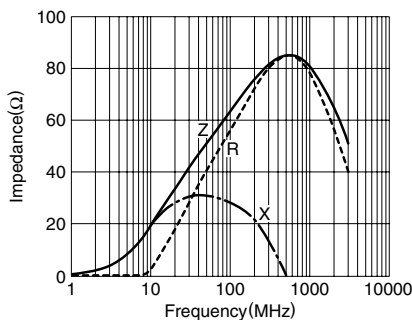


## TYPICAL ELECTRICAL CHARACTERISTICS Z, X, R vs. FREQUENCY CHARACTERISTICS

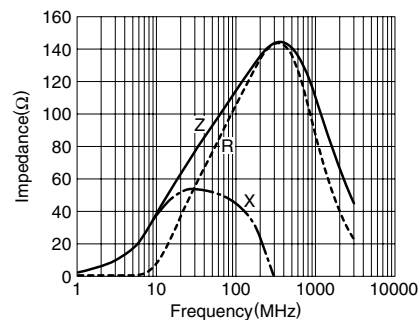
MPZ1608S300A



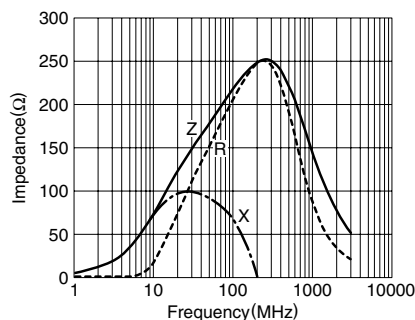
MPZ1608S600A



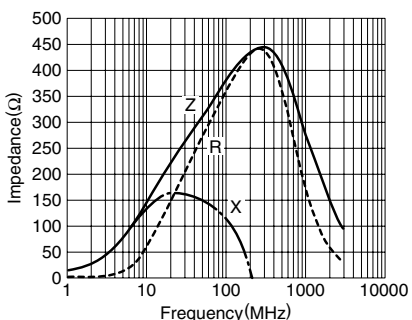
MPZ1608S101A



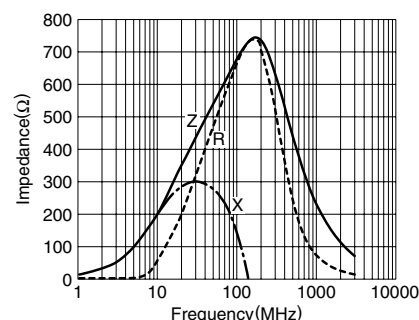
MPZ1608S221A



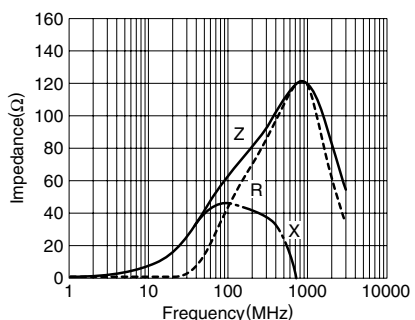
MPZ1608R391A



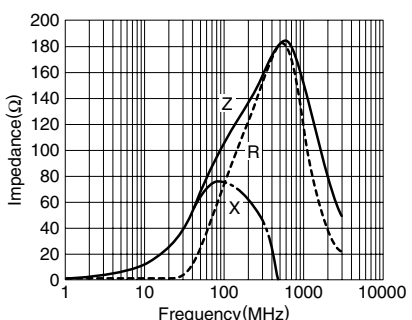
MPZ1608S601A



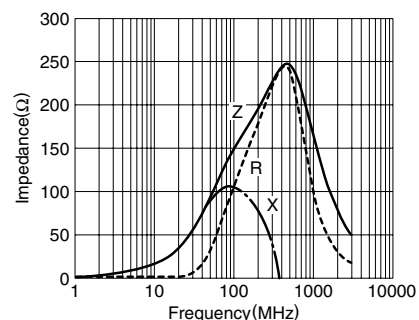
MPZ1608Y600B



MPZ1608Y101B



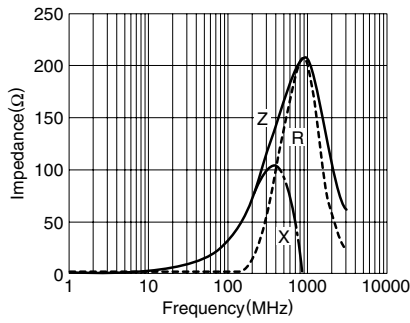
MPZ1608Y151B



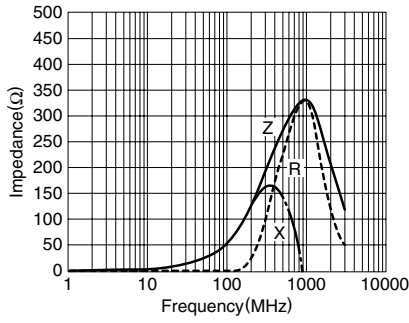
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### TYPICAL ELECTRICAL CHARACTERISTICS Z, X, R vs. FREQUENCY CHARACTERISTICS

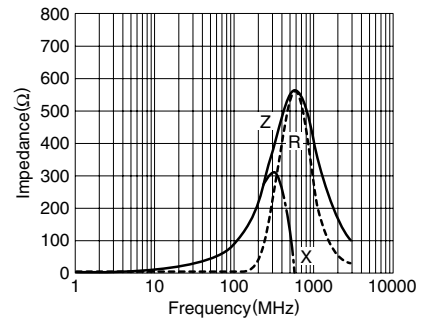
MPZ1608D300B



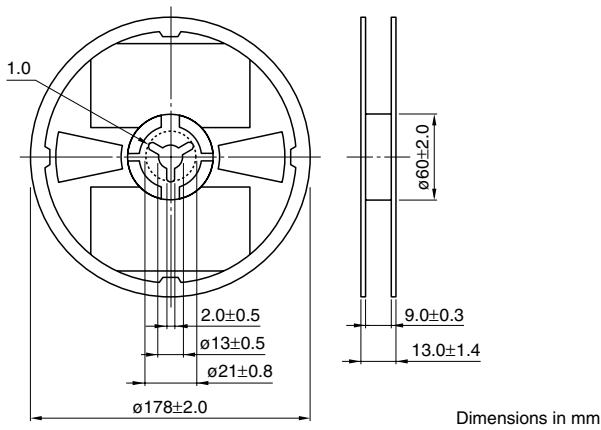
MPZ1608D600B



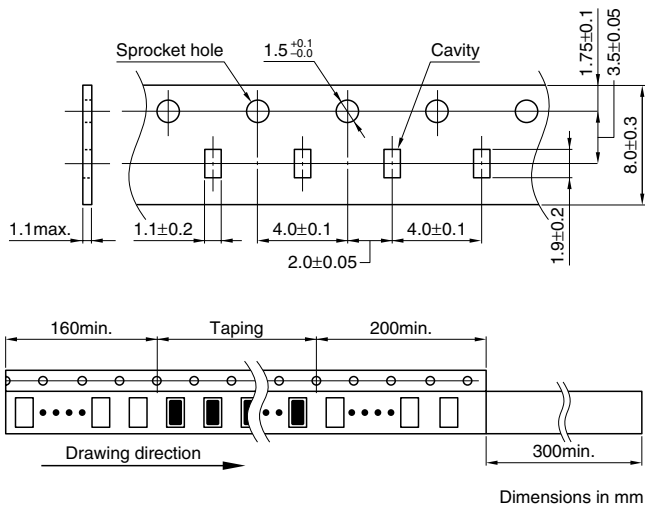
MPZ1608D101B



### PACKAGING STYLES REEL DIMENSIONS



### TAPE DIMENSIONS



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