

# 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 600Ω (at 100MHz) and rated current to 1A, while minimizes Rdc under 150mΩ 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

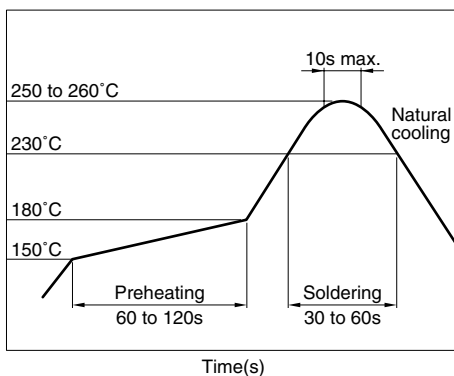
Noise suppression of personal computers, USB/IEEE1394 interfaces, HDDs, CD-ROMs, DVDs, DSCs, LCD panels, cellular phones, etc.

### PRODUCT IDENTIFICATION

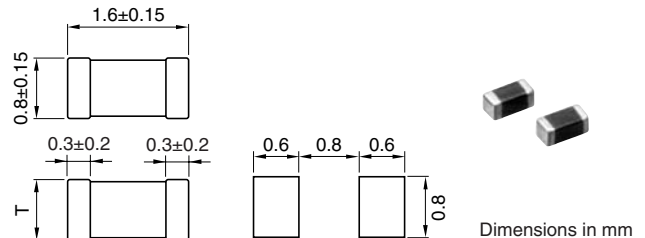
MPZ 1608 S 221 A T  
(1) (2) (3) (4) (5) (6)

- (1) Series name
- (2) Dimensions L×W
- (3) Material code
- (4) Nominal impedance  
221: 220Ω 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±0.15mm	3mg
0.8±0.15mm	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°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°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**

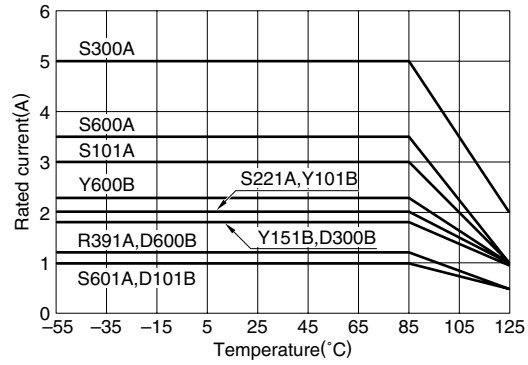
Part No.	Impedance ( $\Omega$ )[100MHz] <sup>*1</sup>	DC resistance ( $\Omega$ )max.	Rated current <sup>*2</sup> (A)max.	Thickness T(mm)
MPZ1608S300A	30±10 $\Omega$	0.01	5	0.6
MPZ1608S600A	60±25%	0.02	3.5	0.6
MPZ1608S101A	100±25%	0.03	3	0.6
MPZ1608S221A	220±25%	0.05	2	0.8
MPZ1608R391A	390±25%	0.12	1.2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

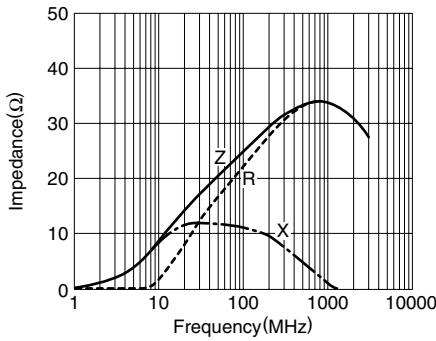
**RATED CURRENT vs. TEMPERATURE CHARACTERISTICS (DERATING)**



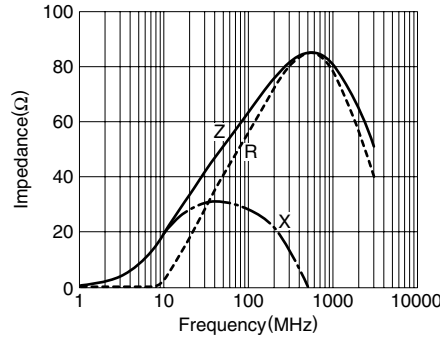
**TYPICAL ELECTRICAL CHARACTERISTICS**

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

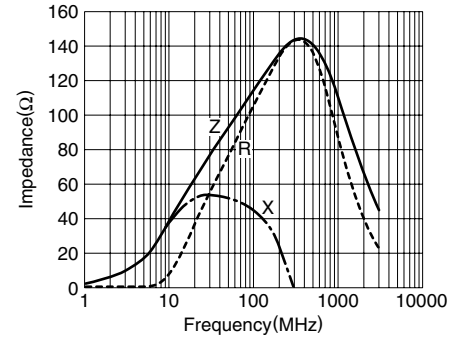
**MPZ1608S300A**



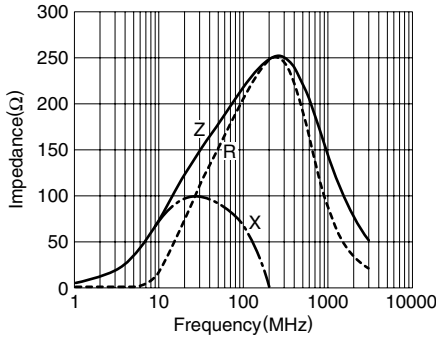
**MPZ1608S600A**



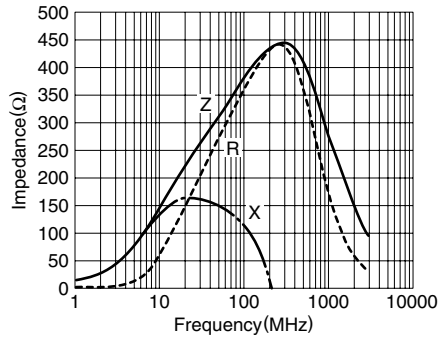
**MPZ1608S101A**



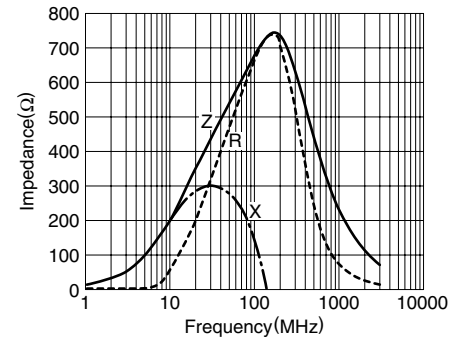
**MPZ1608S221A**



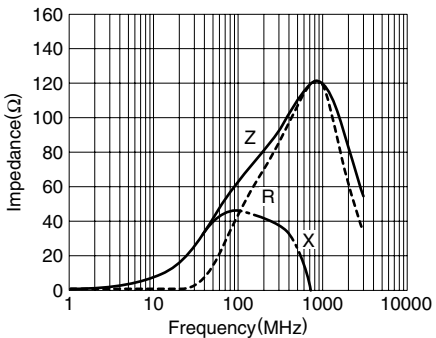
**MPZ1608R391A**



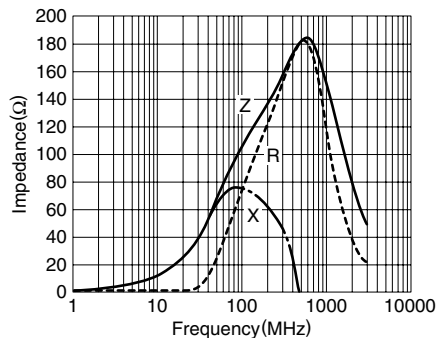
**MPZ1608S601A**



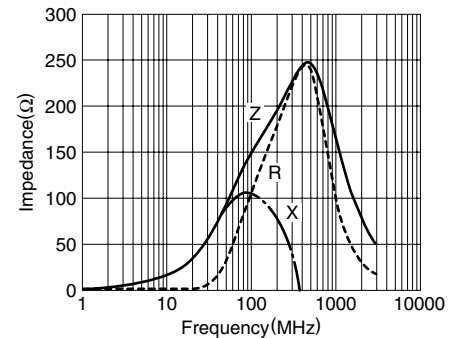
**MPZ1608Y600B**



**MPZ1608Y101B**



**MPZ1608Y151B**



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