### **&TDK**

# Chip Beads(SMD) For Power Line

### **Conformity to RoHS Directive**

### MPZ Series MPZ2012 Type

#### **FEATURES**

- The MPZ series are multilayer chip impeders for power supply line applications.
- High miniaturized, these parts nonetheless exhibit low DC resistance and high current handling capability.
- The products contain no lead and also support lead-free soldering.
- It is a product conforming to RoHS directive.

#### **APPLICATIONS**

Removal of power line noises of cellular phones, PCs, note PCs, TVs, TV tuners, STBs, audio players, DVDs, DSCs, DVCs, game machines, digital photo frames, car navigation system, PNDs, etc.

#### PRODUCT IDENTIFICATION

 $\frac{\mathsf{MPZ}}{(1)} \ \frac{2012}{(2)} \frac{\mathsf{S}}{(3)} \ \frac{331}{(4)} \ \frac{\mathsf{A}}{(5)} \ \frac{\mathsf{T}}{(6)}$ 

- (1)Series name
- (2)Dimensions L×W
- (3)Material code
- (4)Nominal impedance

331: 330Ω at 100MHz

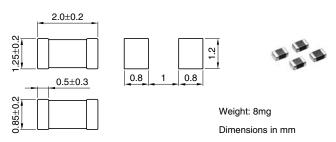
- (5)Characteristic type
- (6)Packaging style

T: Taping

### 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.
- 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.

# SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



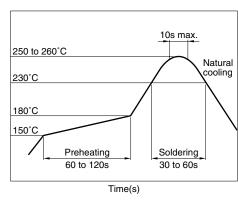
#### **TEMPERATURE RANGES**

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

Packaging style	Quantity
Taping	4000 pieces/reel

# RECOMMENDED SOLDERING CONDITION REFLOW SOLDERING



<sup>•</sup> 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.

<sup>•</sup> 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.)

<sup>•</sup> All specifications are subject to change without notice.

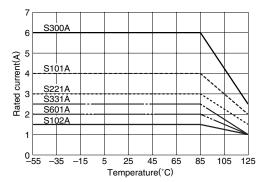
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#### **ELECTRICAL CHARACTERISTICS**

Part No.	Impedance	DC resistance	Rated current*2
	$(\Omega)[100MHz]^{*1}$	$(\Omega)$ max.	(A)max.
MPZ2012S300A	30±10Ω	0.01	6
MPZ2012S101A	100±25%	0.02	4
MPZ2012S221A	220±25%	0.04	3
MPZ2012S331A	330±25%	0.05	2.5
MPZ2012S601A	600±25%	0.1	2
MPZ2012S102A	1000±25%	0.15	1.5

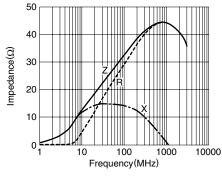
<sup>\*1</sup> Test equipment: E4991A or equivalent Test tool: 16192A or equivalent Test temperature: 25±10°C

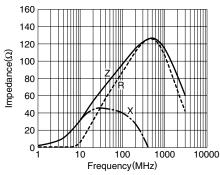
# RATED CURRENT vs. TEMEPERATURE CHARACTERISTICS (DERATING)

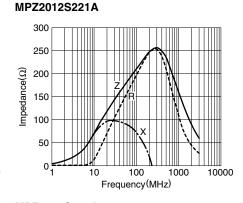


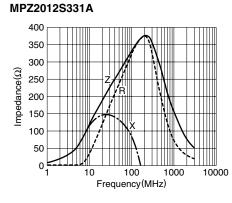
# TYPICAL ELECTRICAL CHARACTERISTICS Z, X, R vs. FREQUENCY CHARACTERISTICS

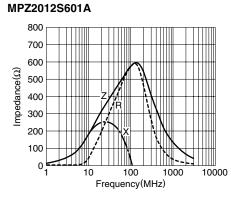
# MPZ2012S300A MPZ2012S101A

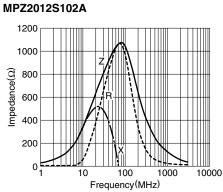




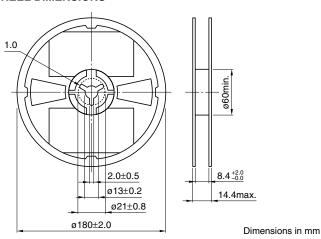




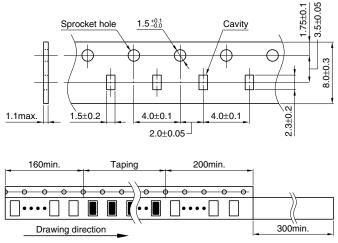




# PACKAGING STYLES REEL DIMENSIONS



#### TAPE DIMENSIONS



Dimensions in mm

<sup>\*2</sup> 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.

<sup>•</sup> All specifications are subject to change without notice.