

Chip beads

For power line

MPZ series (for automotive)



AEC-Q200

MPZ2520 type



FEATURES

- Noise reduction solution for power line.
- Because of its low DC resistance, it can handle large currents of 10A or more, optimal for low power consumption.
- The 2520 shape achieves the industry's highest rated current of 12A.
- Operating temperature range: -55 to +125°C

APPLICATION

- Various ECUs, powertrains, body controls, and car multimedia (telematics).

PART NUMBER CONSTRUCTION

MPZ	2520	S	PH	070	A	T	D25
Series name	L×W×T dimensions 2.5x2.0x0.85 mm	Material name	Internal code	Impedance (Ω) at 100MHz	Characteristic type	Packaging style	Internal code

CHARACTERISTICS SPECIFICATION TABLE

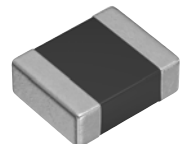
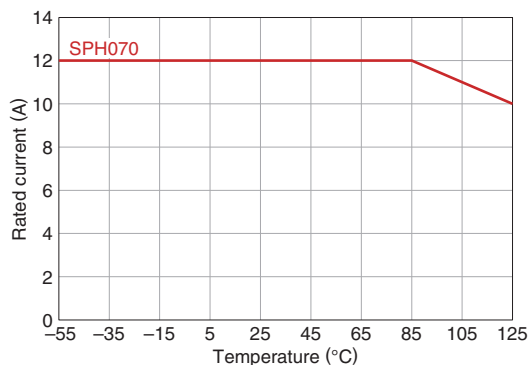
Impedance [100MHz] (Ω)		DC resistance (mΩ)max.	Rated current 85°C 125°C (A)max.		Part No.
Tolerance					
7	±3Ω	1.25	12	10	MPZ2520SPH070ATD25

Measurement equipment

Measurement item	Product No.	Manufacturer
Impedance	4991A+16192A	Keysight Technologies
DC resistance	RM3542+IM9100	HIOKI

* Equivalent measurement equipment may be used.

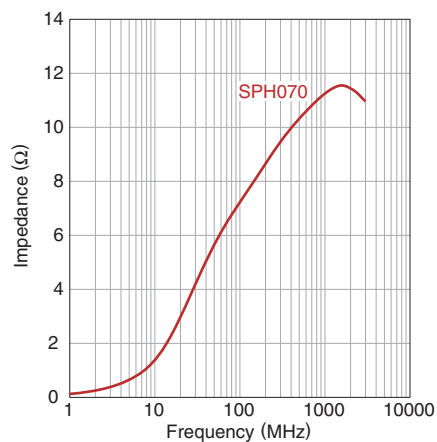
Rated current vs. temperature characteristics (derating)



MPZ2520 type

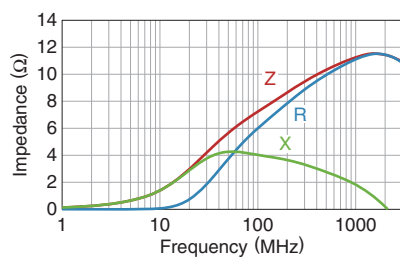
Z VS. FREQUENCY CHARACTERISTICS (BY SERIES)

MPZ2520 series



Z, X, R VS. FREQUENCY CHARACTERISTICS

MPZ2520SPH070ATD25



■ SHAPE & DIMENSIONS

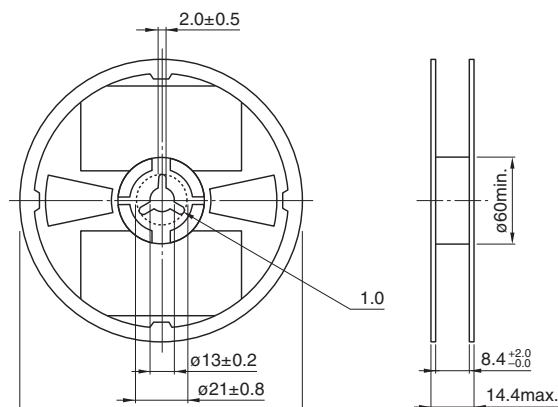


Dimensions in mm

The graph illustrates the temperature profile of a laser welding process. The y-axis represents Temperature, and the x-axis represents Time. The process is divided into three main stages: Preheating, Soldering, and Natural cooling.

- Preheating:** The temperature starts at 150°C and rises to 180°C. This stage takes 60 to 120 seconds.
- Soldering:** The temperature starts at 180°C, rises to a peak of 250 to 260°C, and then falls back to 230°C. The peak is reached within 10 seconds maximum. This stage takes 30 to 60 seconds.
- Natural cooling:** The temperature starts at 230°C and falls back to 150°C.

□ REEL DIMENSIONS



Dimensions in mm

[illegible]

Dimensions in mm

Dimensions in mm

Package quantity	3000 pcs/reel
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Operating temperature range	Storage temperature range*	Individual weight
-55 to +125°C	-55 to +125°C	20 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 (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.