

Version:  
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**(ZO, JW)**  
**Zero Ohm & Jumper**  
**Wire Resistors**

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## ▶ Product Introduction

### ||| A Quick Solution to PCB Board Connections.

#### Features :

- Maximum resistance 0.05Ω
- RoHS compliant with 100% lead free
- Lead Material: Tin-plated copper lead
- Ideal straight - through between point on PCB Boards
- Packing: Tape/Reeled or Bulk

#### Applications :

- Interrupt processing
- Input and output distribution
- Ideal connection for circuit boards
- Dummy components on a PCB test board

Jumper Wire (JW series a zero-ohm link) and zero-ohm resistor (ZO series) are a link used to connect traces on a printed circuit board that is packaged in the same format as a resistor.

The resistance of JW and ZO series is only approximately zero; only a maximum 0.05Ω is specified. Thus, a fractional tolerance (as a percentage of the zero-ohm ideal value) would be infinite and is not specified.

Axial through-hole zero-ohm resistors are especially suited for automatic machine insertion and generally marked with a single black band.

Token's JW and ZO Series offer a quick solution to the following problems:

1. Circuit tuning by changing point connections.
2. An "after the fact design" that requires new point connections.
3. Inability to connect two points on a PCB board due to other circuit paths which must be crossed over.

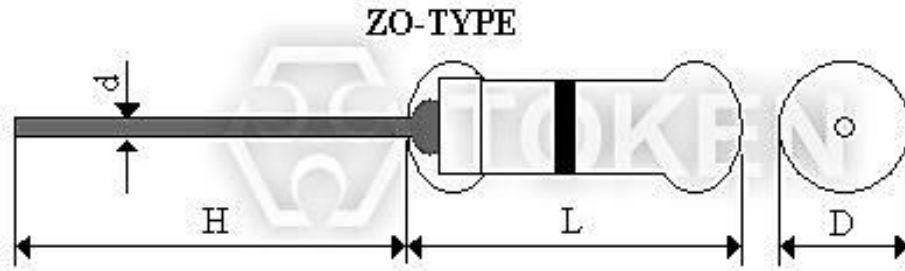
Allowing customers to standardize on the PCB layout and use jumper wire and zero ohm resistor for required model variations, Token has developed a wider version for the interconnection device between points on a PCB board as jumper wires or crossovers. Contact us with your specific needs. For more information, please link to Token official website "[General Purpose Resistors](http://www.token.com.tw)".



**ZO General Specification**

**General Specification (Unit: mm) Zero Ohm Resistor (ZO)**

Type	Rating	Dimension (mm)			
		L Max.	D Max.	H ± 3	d+0.02-0.04
ZO - 1/8	0.125W	4.2	2.0	28	0.5
ZO - 1/4	0.25W	6.8	2.5	28	0.5

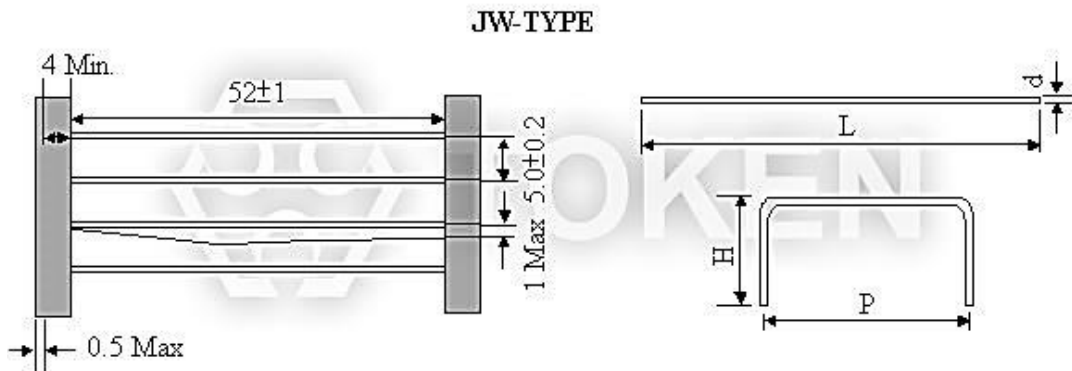


Zero Ohm Resistors (ZO) Dimensions

**JW General Specification**

**General Specification (Unit: mm) Jumper Wire (JW)**

Type	L±1	d+0.02 -0.04	H	P
JW-A	61.5	0.5	3 - 10	5 - 30
JW-B	61.5	0.6	3 - 10	5 - 30



Jumper Wire (JW) Dimensions

► **Electrical Performance**

**Electrical Performance (ZO, JW)**

Requirements	Characteristics
Maximum Resistance	0.05Ω
Lead Material	tin-plead copper
Body Material	Electrical grade, high performance molding compound
Dielectric Withstanding Voltage	Atomspheric-500V RMS, Reduced-325V RMS
Insulation Flammability	Resistor Insulation is self-extinguishing within 10 seconds after externally applied flame is removed.
Current Rating	25 AMPS at 25°C, dreading to 0 AMPS at 150°C

► **Order Codes**

**Order Codes (ZO, JW)**

ZO-1/4	0.25W	TB	
Part Number	Rated Power (W)	Package	
ZO-1/4	0.25W	P	Bulk
ZO-1/8	0.125W	TB	Taping Box
JW-A			
JW-B			

## ► General Information

### General Purpose Resistors with Customized Service

Token Electronics is expanding business to include a broad range of General Purpose Resistor products designed for high volume applications. This expanded range of commercial resistor presents a more comprehensive product offering for Customer Experience Management (CEM) and other high volume customers that require quality products at competitive pricing.

Backed by the same customer service, technical support and quality assurance that Token has always provided, these new commercial products enable you the opportunity to source a wider range of resistors from a trusted supplier.

### General Use

When an ambient temperature exceeds a rated ambient temperature, resistor shall be applied on the derating curve by derating the load power. General purpose resistor under overloads is not combustion resistant and is likely to emit, flame, gas, smoke, red heat, etc. Flame retardant resistor generally emits smoke and red heat in a certain power and over but do not emit fire or flame.

When resistors are shielded or coated with resin etc., stress from the storage heat and the resins are applied. So, performance and reliability should be checked well before use.

When a voltage higher than rated is applied in a short time (single pulse, repeated pulses, surge, etc.), it does not necessarily ensure safety that an effective wattage is not higher than a rated wattage. Then consult with us with your specified pulse wave shape. Resistors shall be used in a condition causing no dew condensation.

Keep temperature from rising by choosing resistor with a higher rated capacity; do not use a component having the exact load value required. For considerations of safety in extended period applications, the rating should be more than four times higher than the actual wattage involved, but never use resistors at less than 25% of its rated power.

In applications where resistors are subject to intermittent current surges and spikes, be sure in advance that the components selected are capable of withstanding brief durations of increased load.

Do not exceed the recommended rated load. Resistor must use within the rated voltage range to prevent the shortening of service life and/or failure of the wound resistance elements.

Minimum load: Resistor must be utilized at 1/10 or more of the rated voltage to prevent poor conductance due to oxidation build-up. For basic particulars for cautions, refer to EIAJ Technical Report RCR-2121 "Guidance for care note on fixed-resistors".