

# Zener diode

## VDZ30B

### ●Application

Voltage regulation

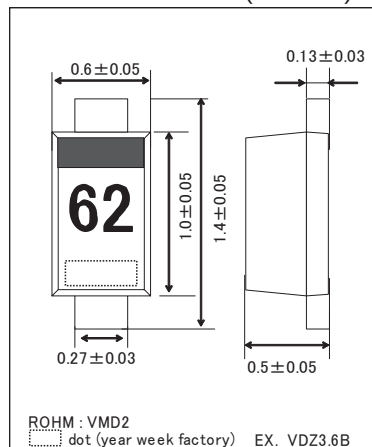
### ●Features

- 1) Ultra small mold type (VMD2).
- 2) High reliability.
- 3) By chip-mounter, automatic mounting is possible.

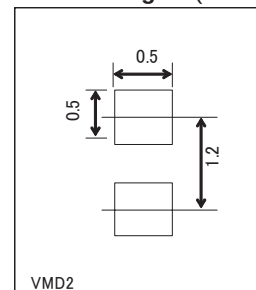
### ●Construction

Silicon Epitaxial Planer

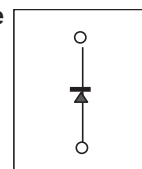
### ●External dimensions (Unit : mm)



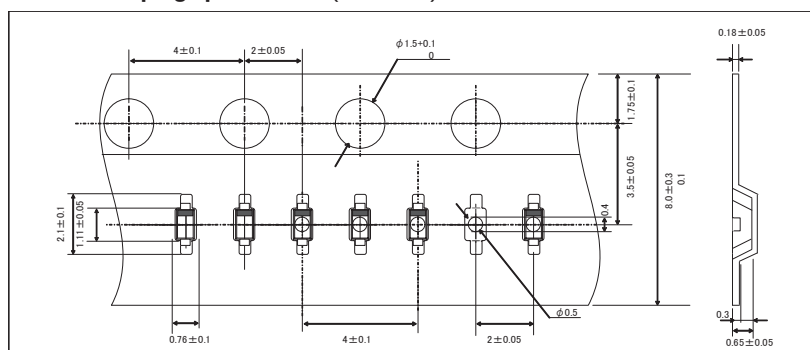
### ●Land size figure (Unit : mm)



### ●Structure



### ●Taping specification (Unit : mm)



### ●Absolute maximum ratings (Ta=25°C)

| Parameter             | Symbol           | Limits      | Unit |
|-----------------------|------------------|-------------|------|
| Power dissipation     | P                | 100         | mW   |
| Junction temperature  | T <sub>j</sub>   | 150         | °C   |
| Storage temperature   | T <sub>stg</sub> | -55 to +150 | °C   |
| Operating temperature | T <sub>opr</sub> | -55 to +150 | °C   |

## Diodes

## ●Electrical characteristics (Ta=25°C)

| TYP.     | Symbol               |        |        |                             |        |                                    |        |                         |       |
|----------|----------------------|--------|--------|-----------------------------|--------|------------------------------------|--------|-------------------------|-------|
|          | Zener voltage: Vz(V) |        |        | Operating resistance: Zz(Ω) |        | Rising operating resistance: Zz(Ω) |        | Reverse current: IR(μA) |       |
|          | MIN.                 | MAX.   | Iz(mA) | MAX.                        | Iz(mA) | MAX.                               | Iz(mA) | MAX.                    | VR(V) |
| VDZ 3.6B | 3.600                | 3.845  | 5.0    | 100                         | 5.0    | 1000                               | 1.0    | 10.0                    | 1.0   |
| VDZ 3.9B | 3.890                | 4.160  | 5.0    | 100                         | 5.0    | 1000                               | 1.0    | 5.0                     | 1.0   |
| VDZ 4.3B | 4.170                | 4.430  | 5.0    | 100                         | 5.0    | 1000                               | 1.0    | 5.0                     | 1.0   |
| VDZ 4.7B | 4.550                | 4.750  | 5.0    | 100                         | 5.0    | 800                                | 0.5    | 2.0                     | 1.0   |
| VDZ 5.1B | 4.980                | 5.200  | 5.0    | 80                          | 5.0    | 500                                | 0.5    | 2.0                     | 1.5   |
| VDZ 5.6B | 5.490                | 5.730  | 5.0    | 60                          | 5.0    | 200                                | 0.5    | 1.0                     | 2.5   |
| VDZ 6.2B | 6.060                | 6.330  | 5.0    | 60                          | 5.0    | 100                                | 0.5    | 1.0                     | 3.0   |
| VDZ 6.8B | 6.650                | 6.930  | 5.0    | 40                          | 5.0    | 60                                 | 0.5    | 0.5                     | 3.5   |
| VDZ 7.5B | 7.280                | 7.600  | 5.0    | 30                          | 5.0    | 60                                 | 0.5    | 0.5                     | 4.0   |
| VDZ 8.2B | 8.020                | 8.360  | 5.0    | 30                          | 5.0    | 60                                 | 0.5    | 0.5                     | 5.0   |
| VDZ 9.1B | 8.850                | 9.230  | 5.0    | 30                          | 5.0    | 60                                 | 0.5    | 0.5                     | 6.0   |
| VDZ 10B  | 9.770                | 10.210 | 5.0    | 30                          | 5.0    | 60                                 | 0.5    | 0.1                     | 7.0   |
| VDZ 11B  | 10.760               | 11.220 | 5.0    | 30                          | 5.0    | 60                                 | 0.5    | 0.1                     | 8.0   |
| VDZ 12B  | 11.740               | 12.240 | 5.0    | 30                          | 5.0    | 80                                 | 0.5    | 0.1                     | 9.0   |
| VDZ 13B  | 12.910               | 13.490 | 5.0    | 37                          | 5.0    | 80                                 | 0.5    | 0.1                     | 10.0  |
| VDZ 15B  | 14.340               | 14.980 | 5.0    | 42                          | 5.0    | 80                                 | 0.5    | 0.1                     | 11.0  |
| VDZ 16B  | 15.850               | 16.510 | 5.0    | 50                          | 5.0    | 80                                 | 0.5    | 0.1                     | 12.0  |
| VDZ 18B  | 17.560               | 18.350 | 2.0    | 65                          | 2.0    | 80                                 | 0.5    | 0.1                     | 13.0  |
| VDZ 20B  | 19.520               | 20.390 | 2.0    | 85                          | 2.0    | 100                                | 0.5    | 0.1                     | 15.0  |
| VDZ 22B  | 21.540               | 22.470 | 2.0    | 100                         | 2.0    | 100                                | 0.5    | 0.1                     | 17.0  |
| VDZ 24B  | 23.720               | 24.780 | 2.0    | 120                         | 2.0    | 120                                | 0.5    | 0.1                     | 19.0  |
| VDZ 27B  | 26.190               | 27.530 | 2.0    | 150                         | 2.0    | 150                                | 0.5    | 0.1                     | 21.0  |
| VDZ 30B  | 29.190               | 30.690 | 2.0    | 200                         | 2.0    | 200                                | 0.5    | 0.1                     | 23.0  |
| VDZ 33B  | 32.150               | 33.790 | 2.0    | 250                         | 2.0    | 250                                | 0.5    | 0.1                     | 25.0  |
| VDZ 36B  | 35.070               | 36.870 | 2.0    | 300                         | 2.0    | 300                                | 0.5    | 0.1                     | 27.0  |

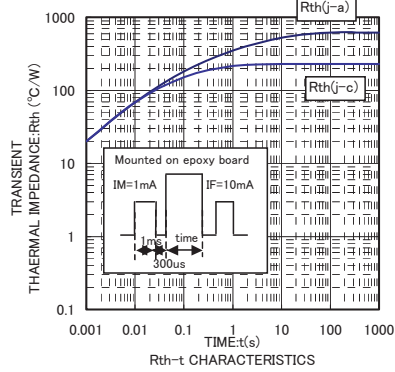
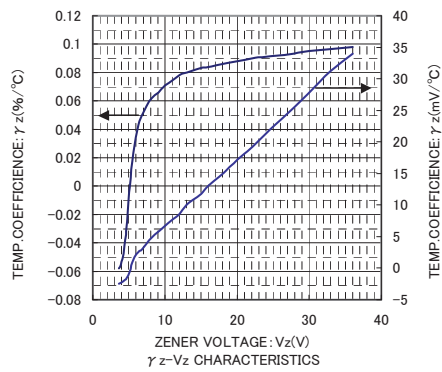
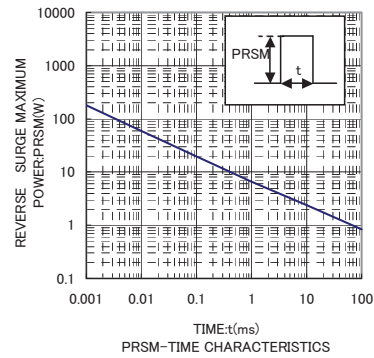
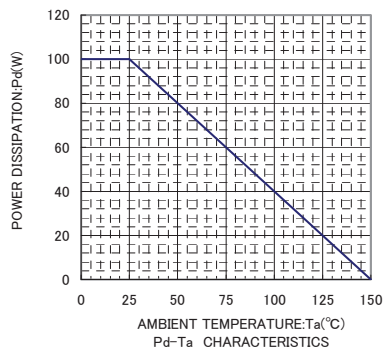
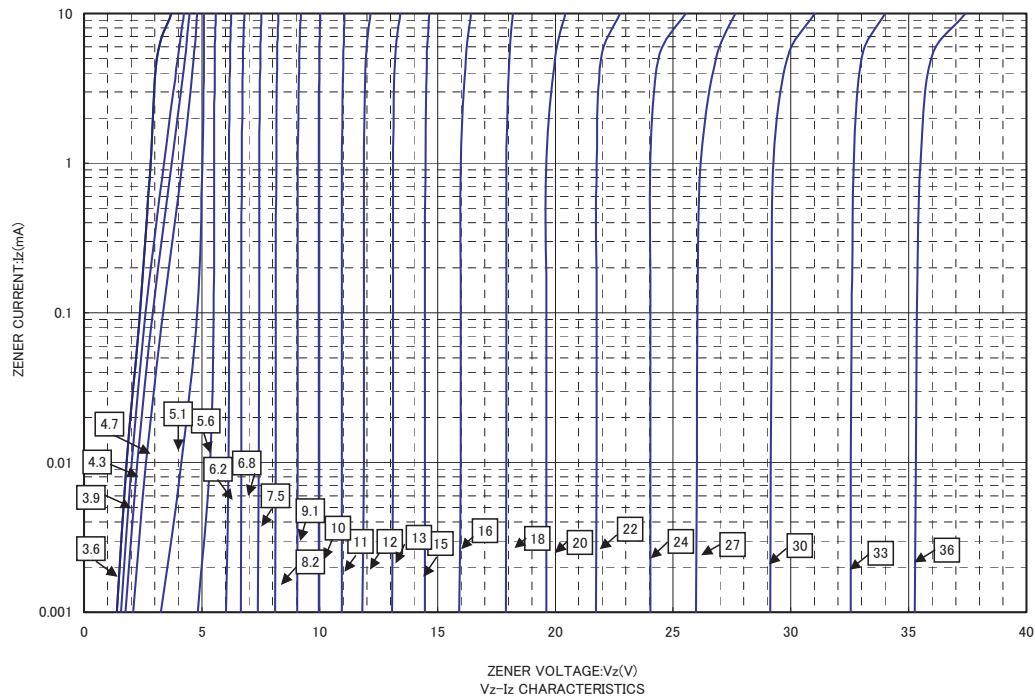
(1) The zener voltage(Vz) is measured 40ms after power is supplied.

(2) The operating resistances(Zz,Zzk) are measured by superimposing a minute alternating current on the regulated current(Iz)

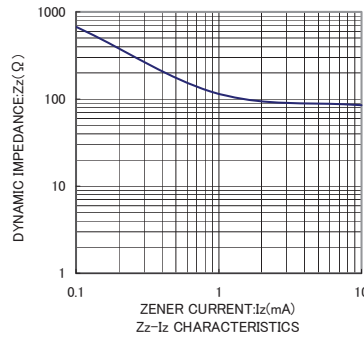
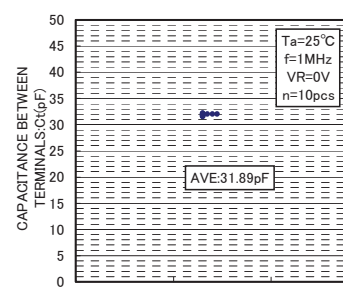
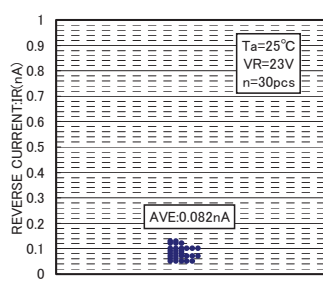
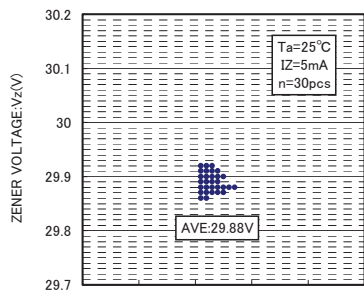
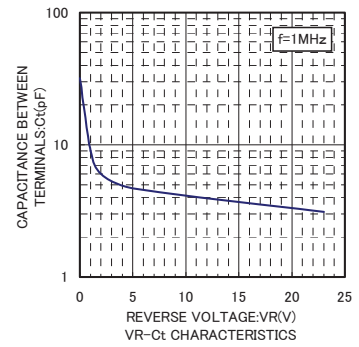
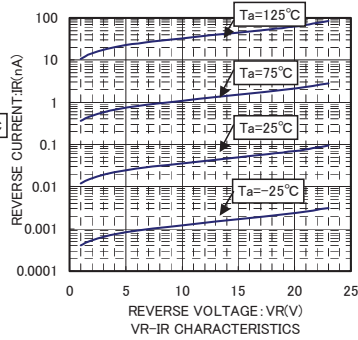
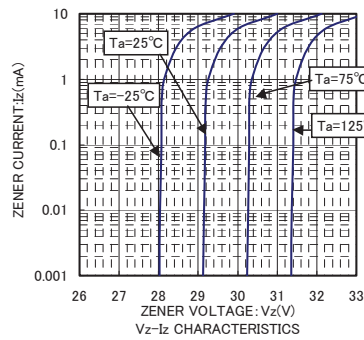
## ●Type No.

| TYPE     | TYPE NO. | TYPE    | TYPE NO. |
|----------|----------|---------|----------|
| VDZ 3.6B | 62       | VDZ 12B | 25       |
| VDZ 3.9B | 72       | VDZ 13B | 35       |
| VDZ 4.3B | 82       | VDZ 15B | 45       |
| VDZ 4.7B | 92       | VDZ 16B | 55       |
| VDZ 5.1B | A2       | VDZ 18B | 65       |
| VDZ 5.6B | C2       | VDZ 20B | 75       |
| VDZ 6.2B | E2       | VDZ 22B | 85       |
| VDZ 6.8B | F2       | VDZ 24B | 95       |
| VDZ 7.5B | H2       | VDZ 27B | A5       |
| VDZ 8.2B | J2       | VDZ 30B | C5       |
| VDZ 9.1B | L2       | VDZ 33B | E5       |
| VDZ 10B  | O5       | VDZ 36B | F5       |
| VDZ 11B  | 15       |         |          |

## Diodes



Diodes



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