

Zener diode

VDZ9.1B

●Application

Voltage regulation

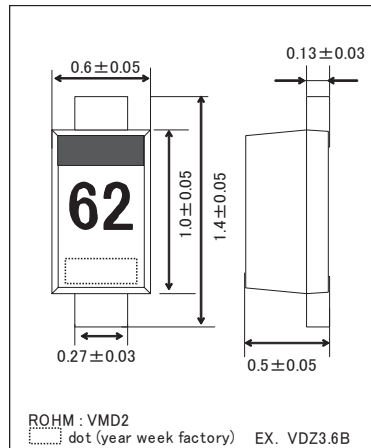
●Features

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

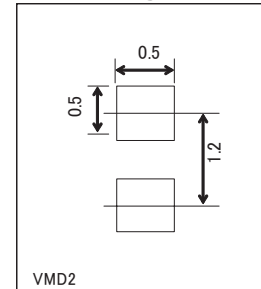
●Construction

Silicon Epitaxial Planer

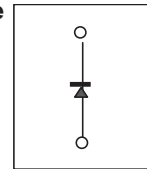
●External dimensions (Unit : mm)



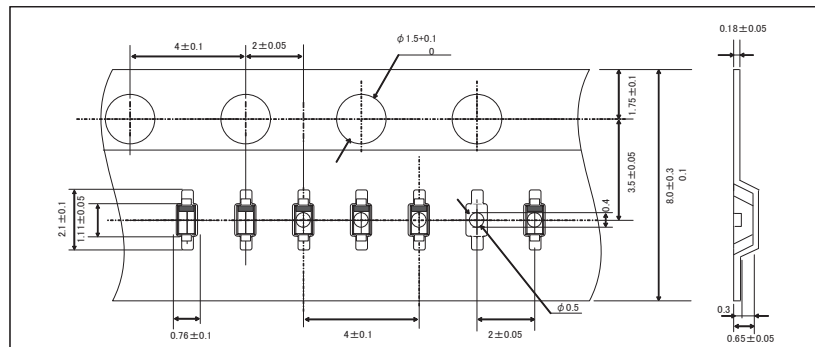
●Land size figure (Unit : mm)



●Structure



●Taping specification (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|-----------------------|------------------|-------------|------|
| Power dissipation | P | 100 | mW |
| Junction temperature | T _j | 150 | °C |
| Storage temperature | T _{stg} | -55 to +150 | °C |
| Operating temperature | T _{opr} | -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 |

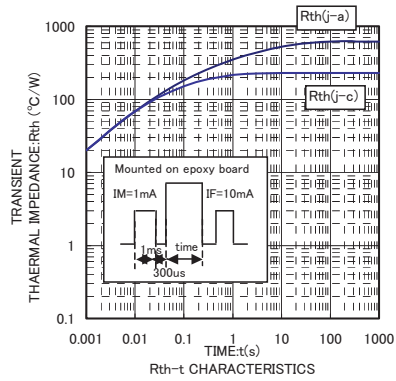
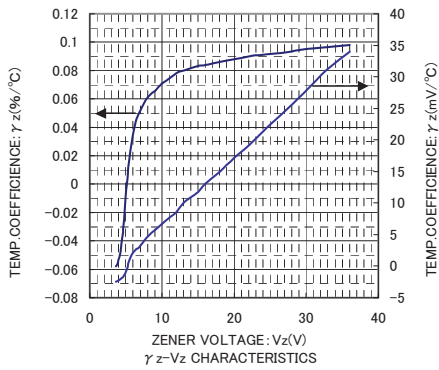
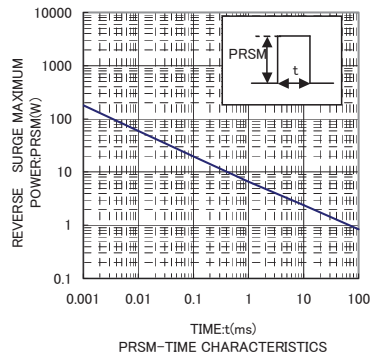
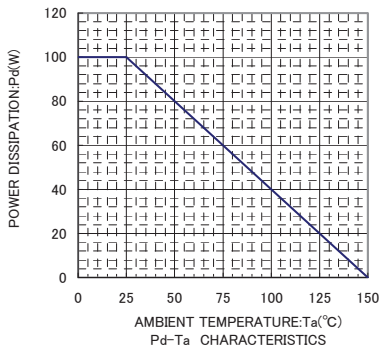
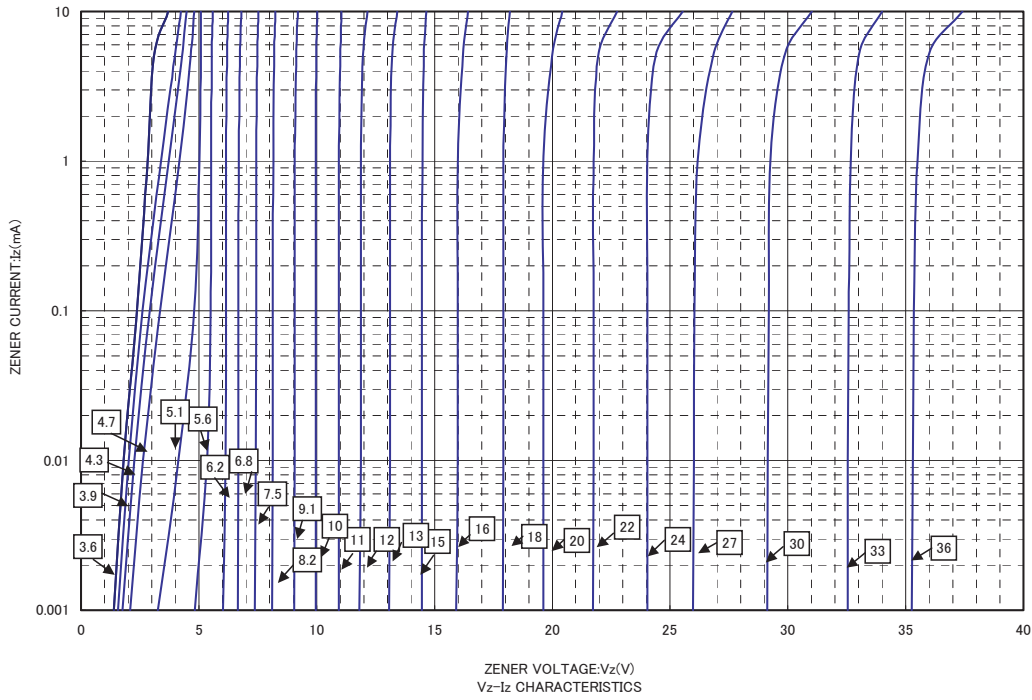
(1) The zener voltage(Vz) is measured 40ms after power is supplied.

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

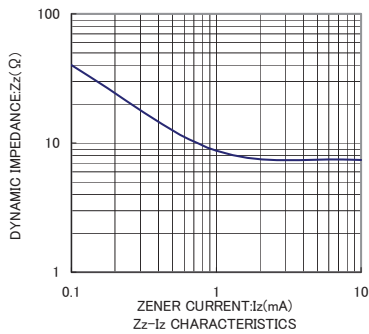
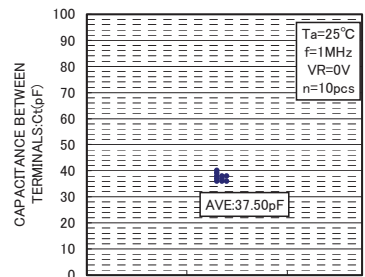
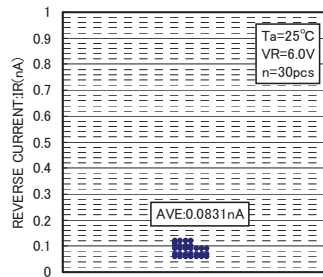
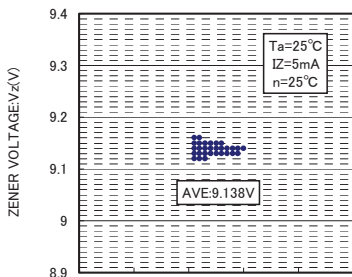
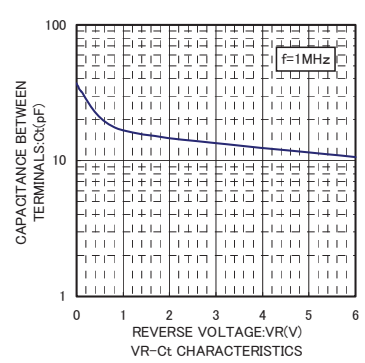
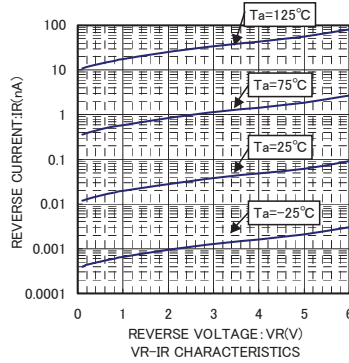
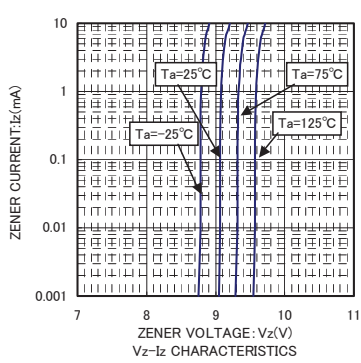
●Type No.

| 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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