

Zener diode

PTZ18B

●Applications

Voltage regulation

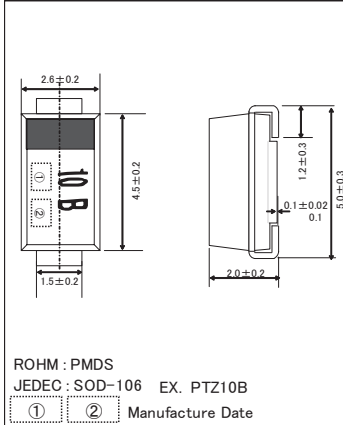
●Features

- 1) Small power mold type. (PMDS)
- 2) High ESD tolerance

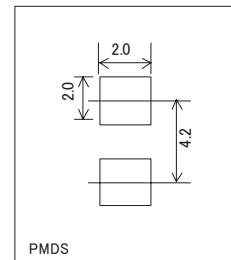
●Construction

Silicon epitaxial planar

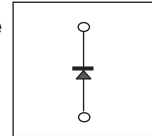
●Dimensions (Unit : mm)



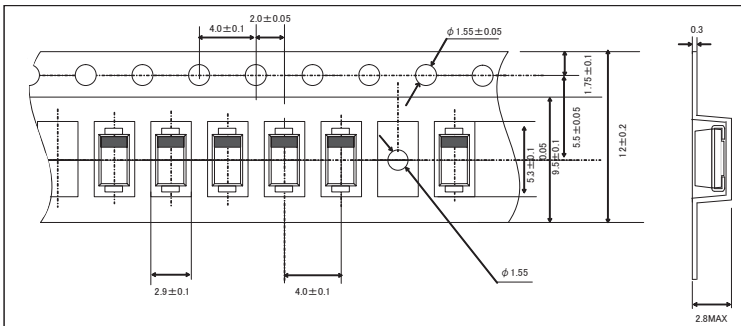
●Land size figure (Unit : mm)



●Structure



●Taping dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|----------------------|------------------|-------------|------|
| Power dissipation | P | 1000 | mW |
| Junction temperature | T _j | 150 | °C |
| Storage temperature | T _{stg} | -55 to +150 | °C |

Diodes

●Electrical characteristics (Ta=25°C)

| TYP. | Symbol | | | | | | | | | | | |
|----------|----------------------|--------|--------|--------|-----------------------------|--------|-------------------------|-------|-------------------------------------|--------|--------------------------------|---|
| | Zener voltage: Vz(V) | | | | Operating resistance: Zz(Ω) | | Reverse current: IR(μA) | | Temperature coefficient: *yz(mV/°C) | | ESD breakdown voltage: ESD(kV) | |
| | MIN. | TYP. | MAX. | Iz(mA) | Max. | Iz(mA) | MAX. | VR(V) | TYP. | Iz(mA) | MIN. | Test Condition |
| PTZ 3.6B | 3.600 | 3.813 | 4.000 | 40 | 15 | 40 | 60 | 1.0 | -2.8 | 40 | 30kV | C=150pF R=330Ω forward and reverse: 10 times |
| PTZ 3.9B | 3.900 | 4.136 | 4.400 | 40 | 15 | 40 | 40 | 1.0 | -2.4 | 40 | | |
| PTZ 4.3B | 4.300 | 4.572 | 4.800 | 40 | 15 | 40 | 20 | 1.0 | -2.1 | 40 | | |
| PTZ 4.7B | 4.700 | 4.924 | 5.200 | 40 | 10 | 40 | 20 | 1.0 | -1.7 | 40 | | |
| PTZ 5.1B | 5.100 | 5.368 | 5.700 | 40 | 8 | 40 | 20 | 1.0 | -0.6 | 40 | | |
| PTZ 5.6B | 5.600 | 5.856 | 6.300 | 40 | 8 | 40 | 20 | 1.5 | 1.4 | 40 | | |
| PTZ 6.2B | 6.200 | 6.509 | 7.000 | 40 | 6 | 40 | 20 | 3.0 | 2.5 | 40 | | |
| PTZ 6.8B | 6.800 | 7.280 | 7.700 | 40 | 6 | 40 | 20 | 3.5 | 3.2 | 40 | | |
| PTZ 7.5B | 7.500 | 7.889 | 8.400 | 40 | 4 | 40 | 20 | 4.0 | 4.2 | 40 | | |
| PTZ 8.2B | 8.200 | 8.655 | 9.300 | 40 | 4 | 40 | 20 | 5.0 | 5.0 | 40 | | |
| PTZ 9.1B | 9.100 | 9.747 | 10.200 | 40 | 6 | 40 | 20 | 6.0 | 5.9 | 40 | | |
| PTZ 10B | 10.000 | 10.310 | 11.200 | 40 | 6 | 40 | 10 | 7.0 | 6.9 | 40 | | |
| PTZ 11B | 11.000 | 11.510 | 12.300 | 20 | 8 | 20 | 10 | 8.0 | 7.9 | 20 | | |
| PTZ 12B | 12.000 | 12.500 | 13.500 | 20 | 8 | 20 | 10 | 9.0 | 8.7 | 20 | | |
| PTZ 13B | 13.300 | 13.820 | 15.000 | 20 | 10 | 20 | 10 | 10.0 | 10.1 | 20 | | |
| PTZ 15B | 14.700 | 15.350 | 16.500 | 20 | 10 | 20 | 10 | 11.0 | 11.8 | 20 | | |
| PTZ 16B | 16.200 | 16.860 | 18.300 | 20 | 12 | 20 | 10 | 12.0 | 13.3 | 20 | | |
| PTZ 18B | 18.000 | 19.000 | 20.300 | 20 | 12 | 20 | 10 | 13.0 | 15.0 | 20 | | |
| PTZ 20B | 20.000 | 20.820 | 22.400 | 20 | 14 | 20 | 10 | 15.0 | 17.4 | 20 | | |
| PTZ 22B | 22.000 | 23.850 | 24.500 | 10 | 14 | 10 | 10 | 17.0 | 19.4 | 10 | | |
| PTZ 24B | 24.000 | 25.310 | 27.600 | 10 | 16 | 10 | 10 | 19.0 | 21.6 | 10 | | |
| PTZ 27B | 27.000 | 28.700 | 30.800 | 10 | 16 | 10 | 10 | 21.0 | 24.6 | 10 | | |
| PTZ 30B | 30.000 | 31.570 | 34.000 | 10 | 18 | 10 | 10 | 23.0 | 27.5 | 10 | | |
| PTZ 33B | 33.000 | 34.950 | 37.000 | 10 | 18 | 10 | 10 | 25.0 | 30.8 | 10 | | |
| PTZ 36B | 36.000 | 39.240 | 40.000 | 10 | 20 | 10 | 10 | 27.0 | 37.0 | 10 | | |

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

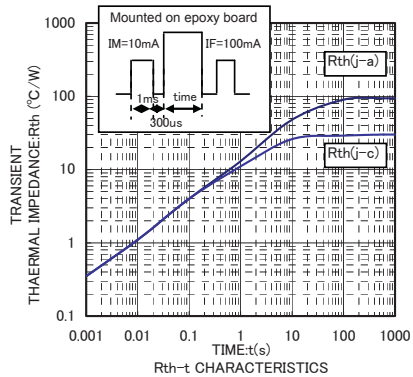
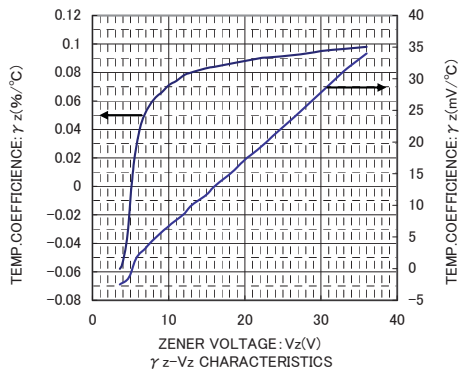
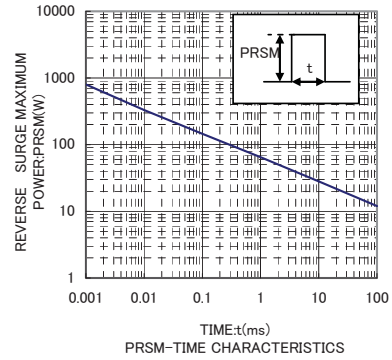
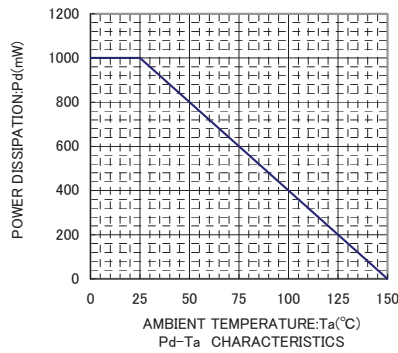
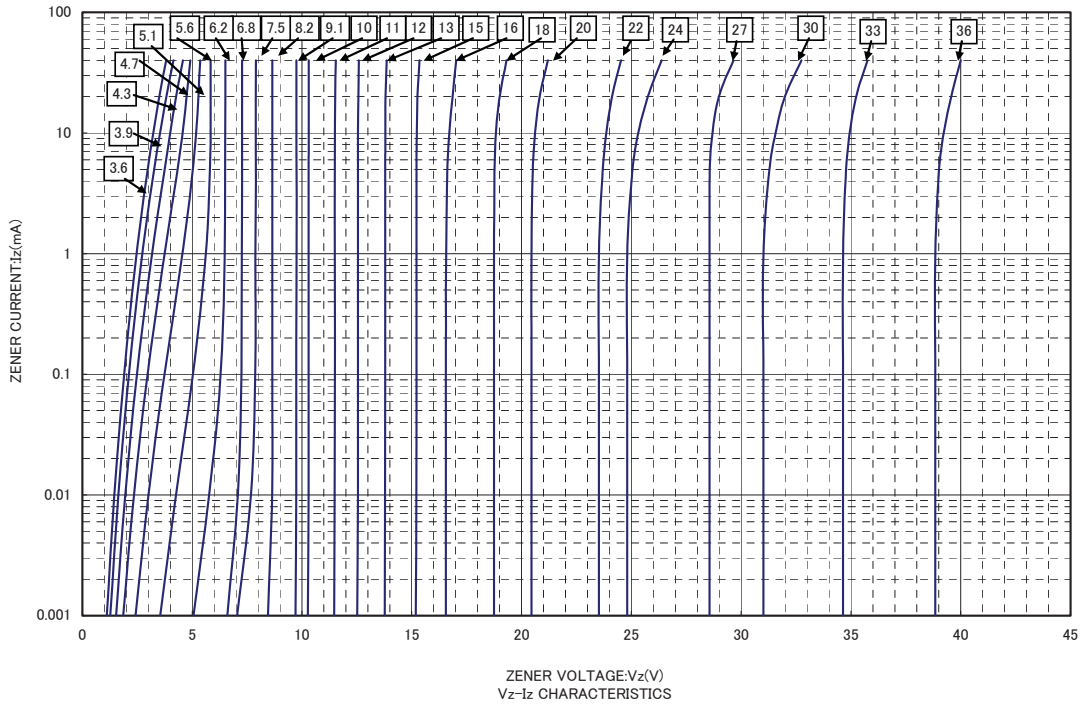
(2) The operating resistances(Zz,Zzk) are measured by superimposing a minute alternating current on the regulated current(Iz)

●Marking (TYPE NO.)

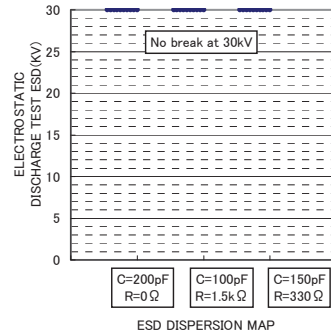
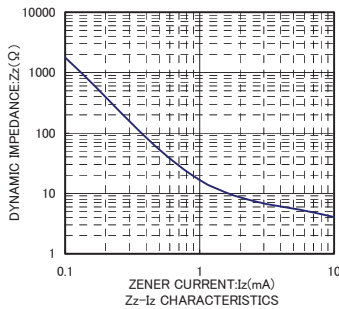
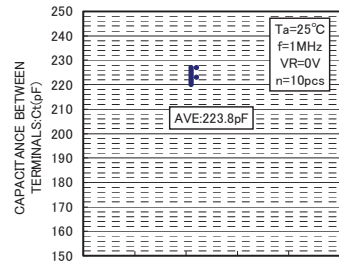
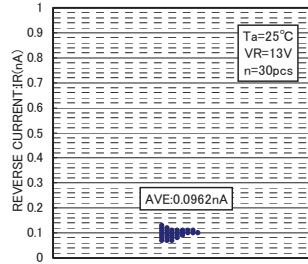
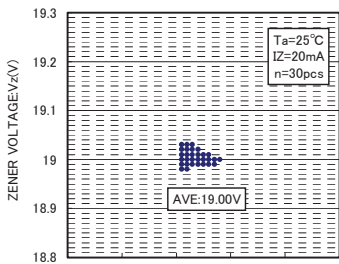
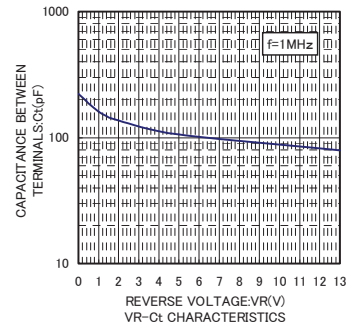
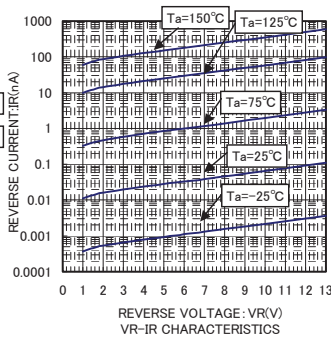
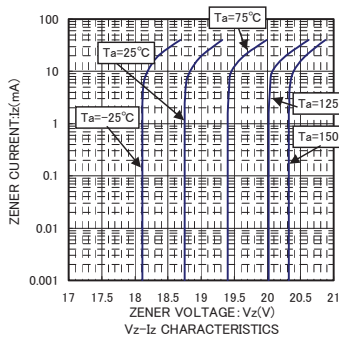
| TYPE | TYPE NO. | TYPE | TYPE NO. | TYPE | TYPE NO. |
|----------|----------|----------|----------|---------|----------|
| PTZ 3.6B | 3.6B | PTZ 8.2B | 8.2B | PTZ 20B | 20B |
| PTZ 3.9B | 3.9B | PTZ 9.1B | 9.1B | PTZ 22B | 22B |
| PTZ 4.3B | 4.3B | PTZ 10B | 10B | PTZ 24B | 24B |
| PTZ 4.7B | 4.7B | PTZ 11B | 11B | PTZ 27B | 27B |
| PTZ 5.1B | 5.1B | PTZ 12B | 12B | PTZ 30B | 30B |
| PTZ 5.6B | 5.6B | PTZ 13B | 13B | PTZ 33B | 33B |
| PTZ 6.2B | 6.2B | PTZ 15B | 15B | PTZ 36B | 36B |
| PTZ 6.8B | 6.8B | PTZ 16B | 16B | | |
| PTZ 7.5B | 7.5B | PTZ 18B | 18B | | |

Diodes

● Electrical characteristic curves (Ta=25°C)



Diodes



Notes

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