

Zener diode

TFZ series

Applications

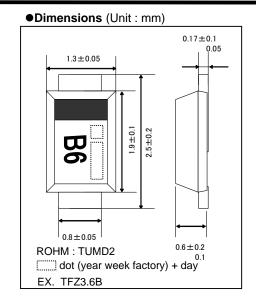
Voltage regulation

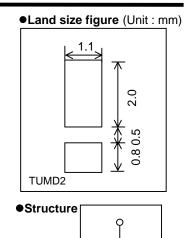
● Features

- 1) Small power mold type (TUMD2)
- 2) High reliability
- 3) By chip-mouter, automatic mouting is possible.

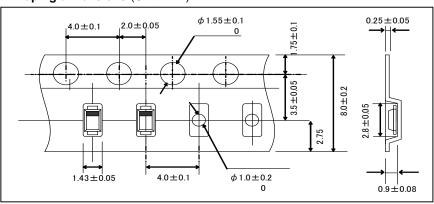
●Construction

Silicon epitaxial planer





●Taping dimensions (Unit : mm)



● Absolute maximum ratings (Ta=25°C)

| , , | | | | | | |
|----------------------|--------|-------------|------|--|--|--|
| Parameter | Symbol | Limits | Unit | | | |
| Power dissipation | Р | 500 | mW | | | |
| Junction temperature | Tj | 150 | °C | | | |
| Storage temperature | Tstg | −55 to +150 | °C | | | |
| Operating resistance | Topr | −55 to +150 | °C | | | |

●Electical characteristics (Ta=25°C)

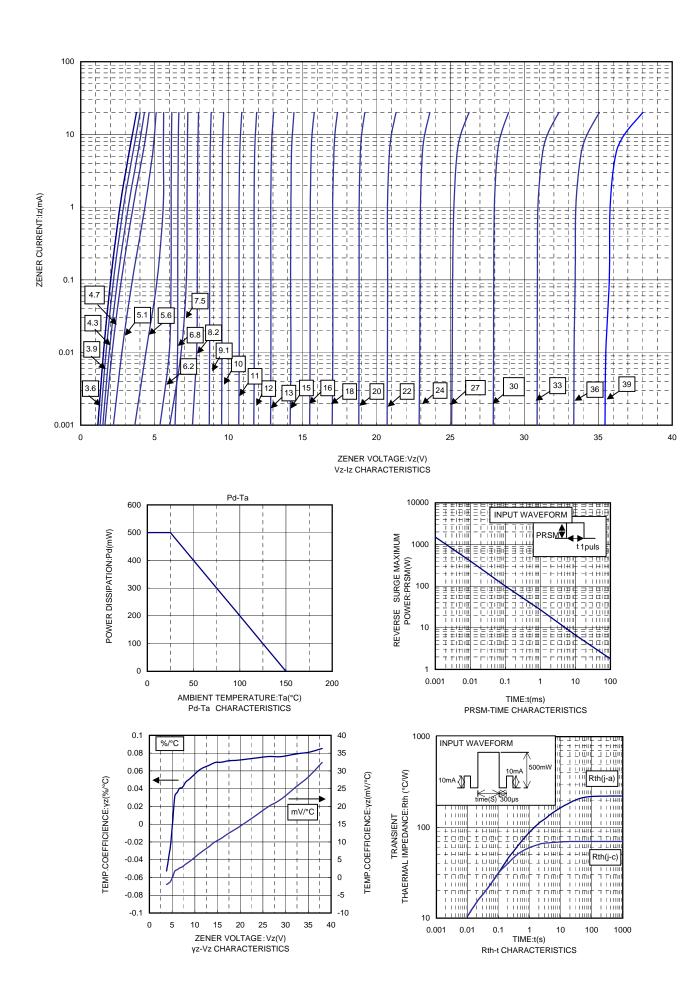
| | Symbol | | | | | | | |
|----------|----------------------|--------|-----------------------------------|------|------------------------|------|----------|--|
| TYP. | Zener Voltage: Vz(V) | | Dynamic Impedance : $Z_Z(\Omega)$ | | Reverse | | | |
| | | | | | Current : $I_R(\mu A)$ | | | |
| | MIN. | MAX. | Iz(mA) | MAX. | Iz(mA) | MAX. | $V_R(V)$ | |
| TFZ 3.6B | 3.600 | 3.845 | 20 | 60 | 20 | 10 | 1.0 | |
| TFZ 3.9B | 3.890 | 4.160 | 20 | 50 | 20 | 5 | 1.0 | |
| TFZ 4.3B | 4.170 | 4.430 | 20 | 40 | 20 | 5 | 1.0 | |
| TFZ 4.7B | 4.550 | 4.800 | 20 | 25 | 20 | 5 | 1.0 | |
| TFZ 5.1B | 4.940 | 5.200 | 20 | 20 | 20 | 5 | 1.5 | |
| TFZ 5.6B | 5.450 | 5.730 | 20 | 13 | 20 | 5 | 2.5 | |
| TFZ 6.2B | 5.960 | 6.270 | 20 | 10 | 20 | 5 | 3.0 | |
| TFZ 6.8B | 6.490 | 6.830 | 20 | 8 | 20 | 2 | 3.5 | |
| TFZ 7.5B | 7.070 | 7.450 | 20 | 8 | 20 | 0.5 | 4.0 | |
| TFZ 8.2B | 7.780 | 8.190 | 20 | 8 | 20 | 0.5 | 5.0 | |
| TFZ 9.1B | 8.570 | 9.010 | 20 | 8 | 20 | 0.5 | 6.0 | |
| TFZ 10B | 9.410 | 9.900 | 20 | 8 | 20 | 0.2 | 7.0 | |
| TFZ 11B | 10.500 | 11.050 | 10 | 10 | 10 | 0.2 | 8.0 | |
| TFZ 12B | 11.440 | 12.030 | 10 | 12 | 10 | 0.2 | 9.0 | |
| TFZ 13B | 12.550 | 13.210 | 10 | 14 | 10 | 0.2 | 10 | |
| TFZ 15B | 13.890 | 14.620 | 10 | 16 | 10 | 0.2 | 11 | |
| TFZ 16B | 15.250 | 16.040 | 10 | 18 | 10 | 0.2 | 12 | |
| TFZ 18B | 16.820 | 17.700 | 10 | 23 | 10 | 0.2 | 13 | |
| TFZ 20B | 18.630 | 19.590 | 10 | 28 | 10 | 0.2 | 15 | |
| TFZ 22B | 20.640 | 21.710 | 5 | 30 | 5 | 0.2 | 17 | |
| TFZ 24B | 22.610 | 23.770 | 5 | 35 | 5 | 0.2 | 19 | |
| TFZ 27B | 24.970 | 26.260 | 5 | 45 | 5 | 0.2 | 21 | |
| TFZ 30B | 27.700 | 29.130 | 5 | 55 | 5 | 0.2 | 23 | |
| TFZ 33B | 30.320 | 31.880 | 5 | 65 | 5 | 0.2 | 25 | |
| TFZ 36B | 32.790 | 34.490 | 5 | 75 | 5 | 0.2 | 27 | |
| TFZ 39B | 35.360 | 37.190 | 5 | 85 | 5 | 0.2 | 30 | |

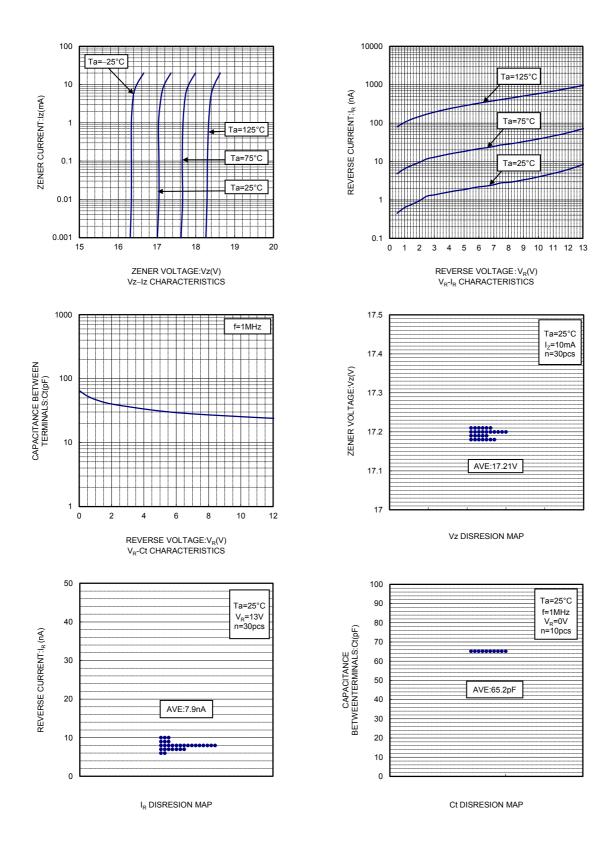
⁽¹⁾ The zener voltage(Vz) is measured 40ms after power is supplied.

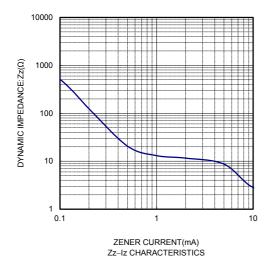
●MARKING (TYPE NO.)

| TYPE | TYPE NO. | TYPE | TYPE NO. |
|----------|----------|---------|----------|
| TFZ 3.6B | B 6 | TFZ 16B | ВМ |
| TFZ 3.9B | B 7 | TFZ 18B | BN |
| TFZ 4.3B | B 8 | TFZ 20B | ВО |
| TFZ 4.7B | B 9 | TFZ 22B | ΒP |
| TFZ 5.1B | ВА | TFZ 24B | ВQ |
| TFZ 5.6B | ВВ | TFZ 27B | BR |
| TFZ 6.2B | ВС | TFZ 30B | BS |
| TFZ 6.8B | B D | TFZ 33B | ВТ |
| TFZ 7.5B | ΒE | TFZ 36B | ВU |
| TFZ 8.2B | BF | TFZ 39B | ВV |
| TFZ 9.1B | ВG | | |
| TFZ 10B | ВН | | |
| TFZ 11B | ΒI | | |
| TFZ 12B | ВJ | | |
| TFZ 13B | ВK | | |
| TFZ 15B | B L | | |

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







Notes

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