

## GDZ Series

$V_Z$  : 2.2 to 36 Volts

$P_D$  : 200 mW

### FEATURES :

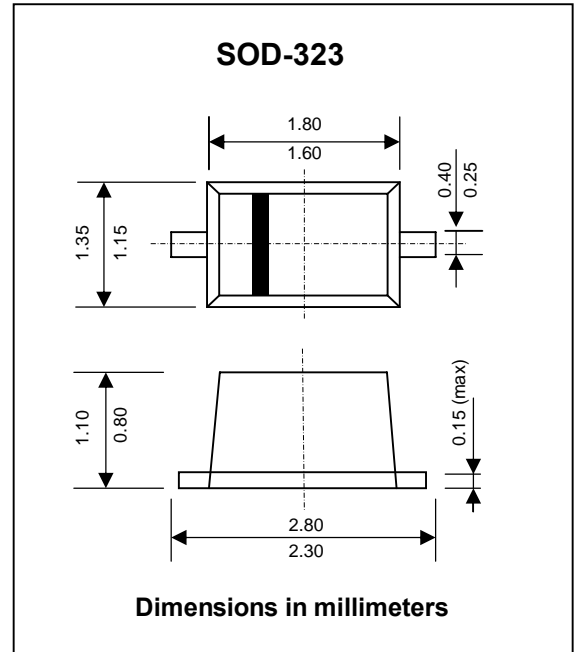
- Silicon planar power zener diodes.
- Low Zener impedance and low leakage current
- Popular in Asian designs
- Compact surface mount device
- Ideal for automated mounting
- Pb / RoHS Free

### MECHANICAL DATA :

Case: SOD-323 Plastic Package

Weight: approx. 0.004g

## ZENER DIODES



### Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

| Parameter                                     | Symbol    | Value        | Unit             |
|---|-----------|--------------|------------------|
| Zener Current see Table "Characteristics"     |           |              |                  |
| Power Dissipation at $T_a = 25^\circ\text{C}$ | $P_D$     | 200          | mW               |
| Junction temperature                          | $T_J$     | 150          | $^\circ\text{C}$ |
| Storage temperature range                     | $T_{STG}$ | -55 to + 150 | $^\circ\text{C}$ |

## ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

| Type Number | Marking Code | Zener voltage<br>$V_z @ I_z^{(1)}$ |        |       | Operating resistance<br>$Z_z^{(2)}$ |         | Rising operating resistance<br>$Z_{zk}^{(2)}$ |         | Maximum Reverse Leakage Current |      |
|-------------|--------------|------------------------------------|--------|-------|-------------------------------------|---------|---|---------|---------------------------------|------|
|             |              | Min.                               | Max.   | $I_z$ | Max.                                | @ $I_z$ | Max.  | @ $I_z$ | $I_R$                           | (V)  |
|             |              | (V)                                | (V)    | (mA)  | ( $\Omega$ )                        | (mA)    | ( $\Omega$ )                                  | (mA)    | ( $\mu A$ )                     |      |
| GDZ 2.0B    | 0 2          | 2.020                              | 2.200  | 5     | 100                                 | 5       | 1000  | 0.5     | 120                             | 0.5  |
| GDZ 2.2B    | 1 2          | 2.220                              | 2.410  | 5     | 100                                 | 5       | 1000  | 0.5     | 120                             | 0.7  |
| GDZ 2.4B    | 2 2          | 2.430                              | 2.630  | 5     | 100                                 | 5       | 1000  | 0.5     | 120                             | 1.0  |
| GDZ 2.7B    | 3 2          | 2.690                              | 2.910  | 5     | 110                                 | 5       | 1000  | 0.5     | 100                             | 1.0  |
| GDZ 3.0B    | 4 2          | 3.010                              | 3.220  | 5     | 120                                 | 5       | 1000  | 0.5     | 50                              | 1.0  |
| GDZ 3.3B    | 5 2          | 3.320                              | 3.530  | 5     | 120                                 | 5       | 1000  | 0.5     | 20                              | 1.0  |
| GDZ 3.6B    | 6 2          | 3.600                              | 3.845  | 5     | 100                                 | 5       | 1000  | 1.0     | 10                              | 1.0  |
| GDZ 3.9B    | 7 2          | 3.890                              | 4.160  | 5     | 100                                 | 5       | 1000  | 1.0     | 5.0                             | 1.0  |
| GDZ 4.3B    | 8 2          | 4.170                              | 4.430  | 5     | 100                                 | 5       | 1000  | 1.0     | 5.0                             | 1.0  |
| GDZ 4.7B    | 9 2          | 4.550                              | 4.750  | 5     | 100                                 | 5       | 800   | 0.5     | 2.0                             | 1.0  |
| GDZ 5.1B    | T 1          | 4.980                              | 5.200  | 5     | 80                                  | 5       | 500   | 0.5     | 2.0                             | 1.0  |
| GDZ 5.6B    | T 2          | 5.490                              | 5.730  | 5     | 60                                  | 5       | 200   | 0.5     | 1.0                             | 2.5  |
| GDZ 6.2B    | T 3          | 6.060                              | 6.330  | 5     | 60                                  | 5       | 100   | 0.5     | 1.0                             | 3.0  |
| GDZ 6.8B    | T 4          | 6.650                              | 6.930  | 5     | 40                                  | 5       | 60  | 0.5     | 0.5                             | 3.5  |
| GDZ 7.5B    | T 5          | 7.280                              | 7.600  | 5     | 30                                  | 5       | 60  | 0.5     | 0.5                             | 4.0  |
| GDZ 8.2B    | T 6          | 8.020                              | 8.360  | 5     | 30                                  | 5       | 60  | 0.5     | 0.5                             | 5.0  |
| GDZ 9.1B    | T 7          | 8.850                              | 9.230  | 5     | 30                                  | 5       | 60  | 0.5     | 0.5                             | 6.0  |
| GDZ 10B     | T 8          | 9.770                              | 10.210 | 5     | 30                                  | 5       | 60  | 0.5     | 0.1                             | 7.0  |
| GDZ 11B     | T 9          | 10.760                             | 11.220 | 5     | 30                                  | 5       | 60  | 0.5     | 0.1                             | 8.0  |
| GDZ 12B     | T A          | 11.740                             | 12.240 | 5     | 30                                  | 5       | 80  | 0.5     | 0.1                             | 9.0  |
| GDZ 13B     | T B          | 12.910                             | 13.490 | 5     | 37                                  | 5       | 80  | 0.5     | 0.1                             | 10.0 |
| GDZ 15B     | T C          | 14.340                             | 14.980 | 5     | 42                                  | 5       | 80  | 0.5     | 0.1                             | 11.0 |
| GDZ 16B     | T D          | 15.850                             | 16.510 | 5     | 50                                  | 5       | 80  | 0.5     | 0.1                             | 12.0 |
| GDZ 18B     | T E          | 17.560                             | 18.350 | 5     | 65                                  | 5       | 80  | 0.5     | 0.1                             | 13.0 |
| GDZ 20B     | T H          | 19.520                             | 20.390 | 5     | 85                                  | 5       | 100   | 0.5     | 0.1                             | 15.0 |
| GDZ 22B     | T K          | 21.540                             | 22.470 | 5     | 100                                 | 5       | 100   | 0.5     | 0.1                             | 17.0 |
| GDZ 24B     | T L          | 23.720                             | 24.780 | 5     | 120                                 | 5       | 120   | 0.5     | 0.1                             | 19.0 |
| GDZ 27B     | T M          | 26.190                             | 27.530 | 5     | 150                                 | 5       | 150   | 0.5     | 0.1                             | 21.0 |
| GDZ 30B     | T N          | 29.190                             | 30.690 | 5     | 200                                 | 5       | 200   | 0.5     | 0.1                             | 23.0 |
| GDZ 33B     | T P          | 32.150                             | 33.790 | 5     | 250                                 | 5       | 250   | 0.5     | 0.1                             | 25.0 |
| GDZ 36B     | T T          | 35.070                             | 36.870 | 5     | 300                                 | 5       | 300   | 0.5     | 0.1                             | 27.0 |

**Notes:**

- (1) The Zener voltage  $V_z$  is measured 40 ms after power is supplied.
- (2) The operating resistances ( $Z_z$ ,  $Z_{zk}$ ) are measured by superimposing a 1 KHz alternating current on the regulated current ( $I_z$ )