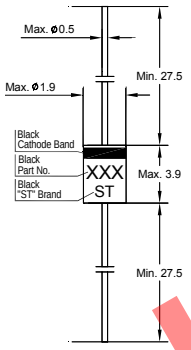
# ZPD2V7B...ZPD75B

## Silicon Epitaxial Planar Zener Diodes




Glass Case DO-35
Dimensions in mm

**Absolute Maximum Ratings ($T_a$ = 25 °C)**

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Power Dissipation | $P_{tot}$ | 500 [1] | mW |
| Junction Temperature | $T_j$ | 175 | °C |
| Storage Temperature Range | $T_{stg}$ | - 55 to + 175 | °C |

[1] Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

**Characteristics at $T_a$ = 25 °C**

| Parameter | Symbol | Max. | Unit |
|---|---|---|---|
| Thermal Resistance Junction to Ambient Air | $R_{thA}$ | 0.3 [1] | K/mW |
| Forward Voltage at $I_F$ = 100 mA | $V_F$ | 1 | V |

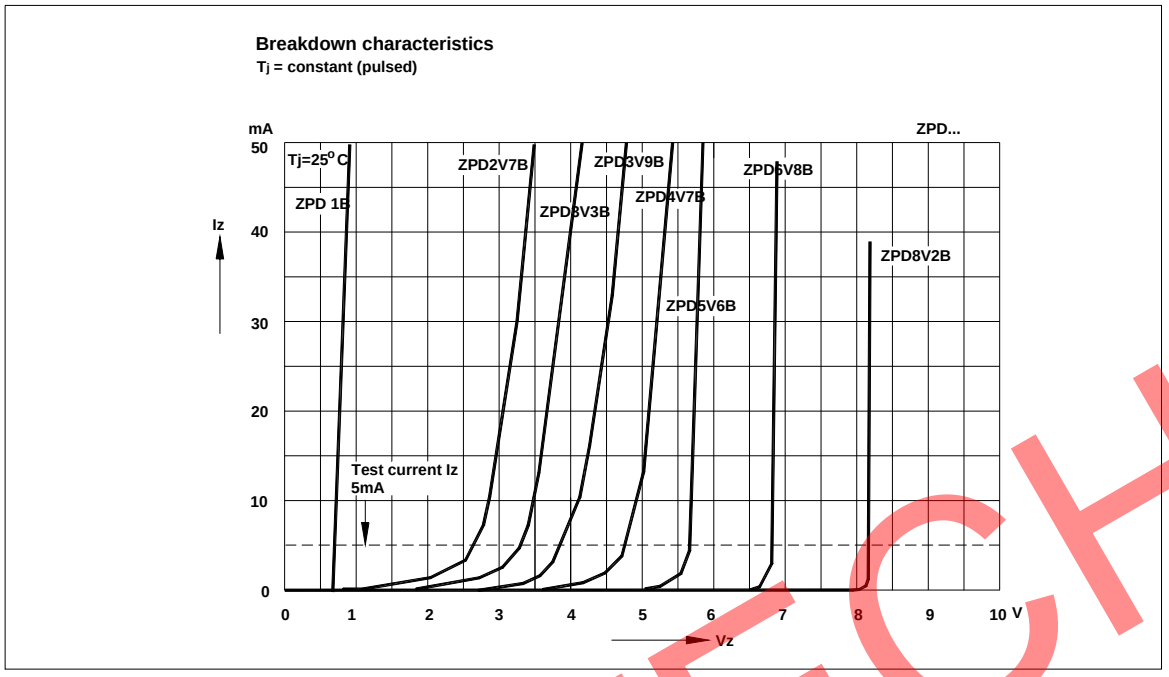
[1] Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

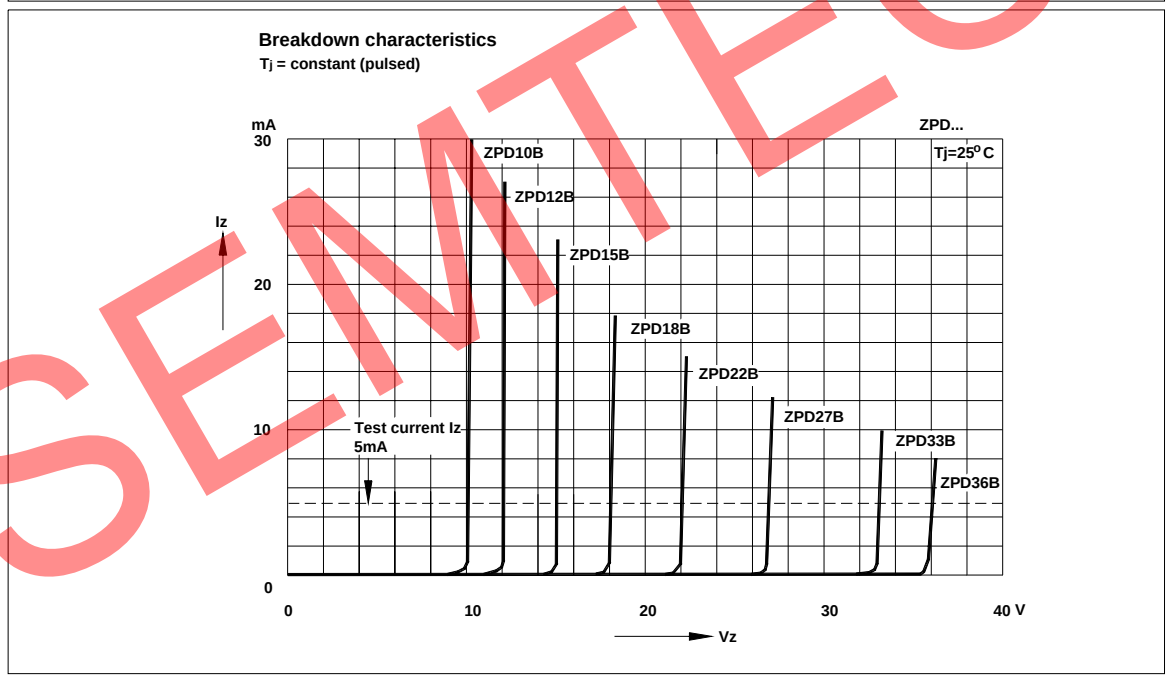
**Characteristics ($T_a$ = 25 °C unless otherwise noted)**

| Type | Zener Voltage Range [1] | | | Dynamic Resistance | | | Min. Reverse Voltage $V_R$ (V) at $I_R$ = 100 nA | Admissible Zener Current [2] | |
|---|---|---|---|---|---|---|---|---|---|
| | $V_{Znom}$ | $V_{ZT}$ | at $I_{ZT}$ | $Z_{ZT}$ | $Z_{ZK}$ | at $I_{ZK}$ | | at $T_a$ = 45 °C $I_Z$ (mA) | at $T_a$ = 25 °C $I_Z$ (mA) |
| | (V) | (V) | (mA) | Max.(Ω) | Max.(Ω) | (mA) | | | |
| ZPD2V7B | 2.7 | 2.65...2.75 | 5 | 83 | 500 | 1 | - | 135 | 160 |
| ZPD3V0B | 3.0 | 2.94...3.06 | 5 | 95 | 500 | 1 | - | 117 | 140 |
| ZPD3V3B | 3.3 | 3.23...3.37 | 5 | 95 | 500 | 1 | - | 109 | 130 |
| ZPD3V6B | 3.6 | 3.53...3.67 | 5 | 95 | 500 | 1 | - | 101 | 120 |
| ZPD3V9B | 3.9 | 3.82...3.98 | 5 | 95 | 500 | 1 | - | 92 | 110 |
| ZPD4V3B | 4.3 | 4.21...4.39 | 5 | 95 | 500 | 1 | - | 85 | 100 |
| ZPD4V7B | 4.7 | 4.61...4.79 | 5 | 78 | 500 | 1 | - | 76 | 90 |
| ZPD5V1B | 5.1 | 5...5.2 | 5 | 60 | 480 | 1 | 0.8 | 67 | 80 |
| ZPD5V6B | 5.6 | 5.49...5.71 | 5 | 40 | 400 | 1 | 1 | 59 | 70 |
| ZPD6V2B | 6.2 | 6.08...6.32 | 5 | 10 | 200 | 1 | 2 | 54 | 64 |
| ZPD6V8B | 6.8 | 6.66...6.94 | 5 | 8 | 150 | 1 | 3 | 49 | 58 |
| ZPD7V5B | 7.5 | 7.35...7.65 | 5 | 7 | 50 | 1 | 5 | 44 | 53 |
| ZPD8V2B | 8.2 | 8.04...8.36 | 5 | 7 | 50 | 1 | 6 | 40 | 47 |
| ZPD9V1B | 9.1 | 8.92...9.28 | 5 | 10 | 50 | 1 | 7 | 36 | 43 |
| ZPD10B | 10 | 9.8...10.2 | 5 | 15 | 70 | 1 | 7.5 | 33 | 40 |
| ZPD11B | 11 | 10.8...11.2 | 5 | 20 | 70 | 1 | 8.5 | 30 | 36 |
| ZPD12B | 12 | 11.8...12.2 | 5 | 20 | 90 | 1 | 9 | 28 | 32 |
| ZPD13B | 13 | 12.7...13.3 | 5 | 25 | 110 | 1 | 10 | 25 | 29 |
| ZPD15B | 15 | 14.7...15.3 | 5 | 30 | 110 | 1 | 11 | 23 | 27 |
| ZPD16B | 16 | 15.7...16.3 | 5 | 40 | 170 | 1 | 12 | 20 | 24 |
| ZPD18B | 18 | 17.6...18.4 | 5 | 50 | 170 | 1 | 14 | 18 | 21 |
| ZPD20B | 20 | 19.6...20.4 | 5 | 50 | 220 | 1 | 15 | 17 | 20 |
| ZPD22B | 22 | 21.6...22.4 | 5 | 55 | 220 | 1 | 17 | 16 | 18 |
| ZPD24B | 24 | 23.5...24.5 | 5 | 80 | 220 | 1 | 18 | 13 | 16 |
| ZPD27B | 27 | 26.5...27.5 | 5 | 80 | 250 | 1 | 20 | 12 | 14 |
| ZPD30B | 30 | 29.4...30.6 | 5 | 80 | 250 | 1 | 22.5 | 10 | 13 |
| ZPD33B | 33 | 32.3...33.7 | 5 | 80 | 250 | 1 | 25 | 9 | 12 |
| ZPD36B | 36 | 35.3...36.7 | 5 | 90 | 250 | 1 | 27 | 9 | 11 |
| ZPD39B | 39 | 38.2...39.8 | 5 | 90 | 300 | 1 | 29 | 8 | 10 |
| ZPD43B | 43 | 42.1...43.9 | 5 | 100 | 700 | 1 | 32 | 7 | 9.2 |
| ZPD47B | 47 | 46.1...47.9 | 5 | 100 | 750 | 1 | 35 | 6 | 8.5 |
| ZPD51B | 51 | 50...52 | 5 | 100 | 750 | 1 | 38 | 6 | 7.8 |
| ZPD56B | 56 | 54.9…57.1 | 2.5 | 135 | 1000 | 0.5 | 42 | 5.2 | 7.1 |
| ZPD62B | 62 | 60.8…63.2 | 2.5 | 150 | 1000 | 0.5 | 47 | 4.8 | 6.4 |
| ZPD68B | 68 | 66.6…69.4 | 2.5 | 200 | 1000 | 0.5 | 51 | 4.1 | 5.8 |
| ZPD75B | 75 | 73.5..76.5 | 2.5 | 250 | 1500 | 0.5 | 55 | 3.9 | 5.3 |

[1] Tested with pulses $t_p$ = 20 ms.

[2] Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.


Breakdown characteristics
Tj = constant (pulsed)
mA
ZPD...
Tj=25° C
ZPD 1B
ZPD2V7B
ZPD3V3B
ZPD3V9B
ZPD4V7B
ZPD5V6B
ZPD6V8B
ZPD8V2B
Iz
Test current Iz
5mA
Vz
0
10
20
30
40
50
1
2
3
4
5
6
7
8
9
10 V


Breakdown characteristics
Tj = constant (pulsed)
mA
ZPD...
Tj=25° C
ZPD10B
ZPD12B
ZPD15B
ZPD18B
ZPD22B
ZPD27B
ZPD33B
ZPD36B
Iz
Test current Iz
5mA
Vz
0
10
20
30
40 V