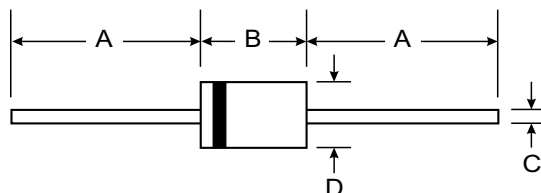


### Features

- Voltage Range 8.2V - 200V
- Glass Passivated Junction
- 5W Steady State
- High Surge Capability
- $\pm 5\%$  Voltage Tolerance on Nominal  $V_Z$  is Standard
- 100% Tested



### Mechanical Data

- Case: Molded Plastic Over Glass Passivated Junction
- Leads: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Approx. Weight: 1.2 grams

| 5W                   |       |      |
|----------------------|-------|------|
| Dim                  | Min   | Max  |
| A                    | 25.40 | —    |
| B                    | 8.38  | 8.89 |
| C                    | 0.94  | 1.09 |
| D                    | 3.30  | 3.68 |
| All Dimensions in mm |       |      |

### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

|                                                                                 | Symbol         | Value       | Unit                      |
|---------------------------------------------------------------------------------|----------------|-------------|---------------------------|
| DC Power Dissipation @ $T_L = 75^\circ\text{C}$ 9.5mm from Body (Board Mounted) | $P_d$          | 5.0         | W                         |
| Power Derating Above $75^\circ\text{C}$ Lead Temperature                        | —              | 20          | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range                                         | $T_j, T_{STG}$ | -55 to +175 | $^\circ\text{C}$          |

- Notes:
1. Nominal Zener Voltage ( $V_Z$ ) is read with the device in standard test clips with 3/8- to 1/2-inch spacing between clip and case of the diode. Before reading, the diode is allowed to stabilize for a period of  $40 \pm 10$  milliseconds at  $25^\circ\text{C} +8, -2^\circ\text{C}$ .
  2. The Zener Impedance ( $Z_Z$  or  $Z_{ZK}$ ) is derived from the 60 Hz ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed on  $I_{ZT}$  or  $I_{ZK}$ , respectively.
  3. The Surge Current ( $I_{ZSM}$ ) is specified as the maximum peak of a nonrecurrent sine wave of 8.3 milliseconds duration.
  4. Voltage regulation ( $\Delta V_Z$ ) is the difference between the voltage measured at 10% and 50% of  $I_{ZM}$ .

# Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

| Part Number | Regulator Voltage<br>(V <sub>Z</sub> )<br>Volts | Test Current<br>(I <sub>Z</sub> )<br>mA dc | Maximum Dynamic Impedance<br>(Z <sub>Z</sub> )<br>Ohms | Maximum Reverse Current<br>(I <sub>R</sub> )<br>μA | I <sub>R</sub> Test Voltage<br>(V <sub>R</sub> )<br>Volts | Maximum Regulator Current<br>(I <sub>ZM</sub> )<br>mA | Maximum Dynamic Knee Impedance<br>(Z <sub>ZK</sub> )<br>@1.0mA<br>Ohms | Maximum Surge Current<br>(I <sub>ZSM</sub> )<br>Amperes | Maximum Voltage Regulation<br>(ΔV <sub>Z</sub> )<br>Volts |
|-------------|-------------------------------------------------|--------------------------------------------|--------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------|
| 1N5344B     | 8.2                                             | 150                                        | 1.5                                                    | 10                                                 | 6.2                                                       | 580                                                   | 200                                                                    | 10.0                                                    | 0.20                                                      |
| 1N5345B     | 8.7                                             | 150                                        | 2.0                                                    | 10                                                 | 6.6                                                       | 545                                                   | 200                                                                    | 9.5                                                     | 0.20                                                      |
| 1N5346B     | 9.1                                             | 150                                        | 2.0                                                    | 7.5                                                | 6.9                                                       | 520                                                   | 150                                                                    | 9.2                                                     | 0.22                                                      |
| 1N5347B     | 10                                              | 125                                        | 2.0                                                    | 5.0                                                | 7.6                                                       | 475                                                   | 125                                                                    | 8.6                                                     | 0.22                                                      |
| 1N5348B     | 11                                              | 125                                        | 2.5                                                    | 5.0                                                | 8.4                                                       | 430                                                   | 125                                                                    | 8.0                                                     | 0.25                                                      |
| 1N5349B     | 12                                              | 100                                        | 2.5                                                    | 2.0                                                | 9.1                                                       | 395                                                   | 125                                                                    | 7.5                                                     | 0.25                                                      |
| 1N5350B     | 13                                              | 100                                        | 2.5                                                    | 1.0                                                | 9.9                                                       | 365                                                   | 100                                                                    | 7.0                                                     | 0.25                                                      |
| 1N5351B     | 14                                              | 100                                        | 2.5                                                    | 1.0                                                | 10.6                                                      | 340                                                   | 75.0                                                                   | 6.7                                                     | 0.25                                                      |
| 1N5352B     | 15                                              | 75                                         | 2.5                                                    | 1.0                                                | 11.5                                                      | 315                                                   | 75.0                                                                   | 6.3                                                     | 0.25                                                      |
| 1N5353B     | 16                                              | 75                                         | 2.5                                                    | 1.0                                                | 12.2                                                      | 295                                                   | 75.0                                                                   | 6.0                                                     | 0.30                                                      |
| 1N5354B     | 17                                              | 70                                         | 2.5                                                    | 0.5                                                | 12.9                                                      | 280                                                   | 75.0                                                                   | 5.8                                                     | 0.35                                                      |
| 1N5355B     | 18                                              | 65                                         | 2.5                                                    | 0.5                                                | 13.7                                                      | 264                                                   | 75.0                                                                   | 5.5                                                     | 0.40                                                      |
| 1N5356B     | 19                                              | 65                                         | 3.0                                                    | 0.5                                                | 14.4                                                      | 250                                                   | 75.0                                                                   | 5.3                                                     | 0.40                                                      |
| 1N5357B     | 20                                              | 65                                         | 3.0                                                    | 0.5                                                | 15.2                                                      | 237                                                   | 75.0                                                                   | 5.1                                                     | 0.40                                                      |
| 1N5358B     | 22                                              | 50                                         | 3.5                                                    | 0.5                                                | 16.7                                                      | 216                                                   | 75.0                                                                   | 4.7                                                     | 0.45                                                      |
| 1N5359B     | 24                                              | 50                                         | 3.5                                                    | 0.5                                                | 18.2                                                      | 198                                                   | 100                                                                    | 4.4                                                     | 0.55                                                      |
| 1N5360B     | 25                                              | 50                                         | 4.0                                                    | 0.5                                                | 19.0                                                      | 190                                                   | 110                                                                    | 4.3                                                     | 0.55                                                      |
| 1N5361B     | 27                                              | 50                                         | 5.0                                                    | 0.5                                                | 20.6                                                      | 176                                                   | 120                                                                    | 4.1                                                     | 0.60                                                      |
| 1N5362B     | 28                                              | 50                                         | 6.0                                                    | 0.5                                                | 21.2                                                      | 170                                                   | 130                                                                    | 3.9                                                     | 0.60                                                      |
| 1N5363B     | 30                                              | 40                                         | 8.0                                                    | 0.5                                                | 22.8                                                      | 158                                                   | 140                                                                    | 3.7                                                     | 0.60                                                      |
| 1N5364B     | 33                                              | 40                                         | 10                                                     | 0.5                                                | 25.1                                                      | 144                                                   | 150                                                                    | 3.5                                                     | 0.60                                                      |
| 1N5365B     | 36                                              | 30                                         | 11                                                     | 0.5                                                | 27.4                                                      | 132                                                   | 160                                                                    | 3.3                                                     | 0.65                                                      |
| 1N5366B     | 39                                              | 30                                         | 14                                                     | 0.5                                                | 29.7                                                      | 122                                                   | 170                                                                    | 3.1                                                     | 0.65                                                      |
| 1N5367B     | 43                                              | 30                                         | 20                                                     | 0.5                                                | 32.7                                                      | 110                                                   | 190                                                                    | 2.8                                                     | 0.70                                                      |
| 1N5368B     | 47                                              | 25                                         | 25                                                     | 0.5                                                | 35.8                                                      | 100                                                   | 210                                                                    | 2.7                                                     | 0.80                                                      |
| 1N5369B     | 51                                              | 25                                         | 27                                                     | 0.5                                                | 38.8                                                      | 93.0                                                  | 230                                                                    | 2.5                                                     | 0.90                                                      |
| 1N5370B     | 56                                              | 20                                         | 35                                                     | 0.5                                                | 42.6                                                      | 86.0                                                  | 280                                                                    | 2.3                                                     | 1.00                                                      |
| 1N5371B     | 60                                              | 20                                         | 40                                                     | 0.5                                                | 45.5                                                      | 79.0                                                  | 350                                                                    | 2.2                                                     | 1.20                                                      |
| 1N5372B     | 62                                              | 20                                         | 42                                                     | 0.5                                                | 47.1                                                      | 76.0                                                  | 400                                                                    | 2.1                                                     | 1.35                                                      |
| 1N5373B     | 68                                              | 20                                         | 44                                                     | 0.5                                                | 51.7                                                      | 70.0                                                  | 500                                                                    | 2.0                                                     | 1.50                                                      |
| 1N5374B     | 75                                              | 20                                         | 45                                                     | 0.5                                                | 56.0                                                      | 63.0                                                  | 620                                                                    | 1.9                                                     | 1.60                                                      |
| 1N5375B     | 82                                              | 15                                         | 65                                                     | 0.5                                                | 62.2                                                      | 58.0                                                  | 720                                                                    | 1.8                                                     | 1.80                                                      |
| 1N5376B     | 87                                              | 15                                         | 75                                                     | 0.5                                                | 66.0                                                      | 54.5                                                  | 760                                                                    | 1.7                                                     | 2.00                                                      |
| 1N5377B     | 91                                              | 15                                         | 75                                                     | 0.5                                                | 69.2                                                      | 52.5                                                  | 760                                                                    | 1.6                                                     | 2.20                                                      |
| 1N5378B     | 100                                             | 12                                         | 90                                                     | 0.5                                                | 76.0                                                      | 47.5                                                  | 800                                                                    | 1.5                                                     | 2.30                                                      |
| 1N5379B     | 110                                             | 12                                         | 125                                                    | 0.5                                                | 83.6                                                      | 43.0                                                  | 1000                                                                   | 1.4                                                     | 2.50                                                      |
| 1N5380B     | 120                                             | 10                                         | 170                                                    | 0.5                                                | 91.2                                                      | 39.5                                                  | 1150                                                                   | 1.3                                                     | 2.50                                                      |
| 1N5381B     | 130                                             | 10                                         | 190                                                    | 0.5                                                | 98.8                                                      | 36.6                                                  | 1250                                                                   | 1.2                                                     | 2.50                                                      |
| 1N5382B     | 140                                             | 8.0                                        | 230                                                    | 0.5                                                | 106                                                       | 34.0                                                  | 1500                                                                   | 1.2                                                     | 2.50                                                      |
| 1N5383B     | 150                                             | 8.0                                        | 330                                                    | 0.5                                                | 114                                                       | 31.6                                                  | 1500                                                                   | 1.1                                                     | 3.00                                                      |
| 1N5384B     | 160                                             | 8.0                                        | 350                                                    | 0.5                                                | 122                                                       | 29.4                                                  | 1650                                                                   | 1.1                                                     | 3.00                                                      |
| 1N5385B     | 170                                             | 8.0                                        | 380                                                    | 0.5                                                | 129                                                       | 28.0                                                  | 1750                                                                   | 1.0                                                     | 3.00                                                      |
| 1N5386B     | 180                                             | 5.0                                        | 430                                                    | 0.5                                                | 137                                                       | 26.4                                                  | 1750                                                                   | 1.0                                                     | 4.00                                                      |
| 1N5387B     | 190                                             | 5.0                                        | 450                                                    | 0.5                                                | 144                                                       | 25.0                                                  | 1850                                                                   | 0.9                                                     | 5.00                                                      |
| 1N5388B     | 200                                             | 5.0                                        | 480                                                    | 0.5                                                | 152                                                       | 23.6                                                  | 1850                                                                   | 0.9                                                     | 5.00                                                      |

V<sub>F</sub> = 1.2V max at I<sub>F</sub> = 1.0A all types.

Suffix 'B' denotes 5% tolerance which is standard.

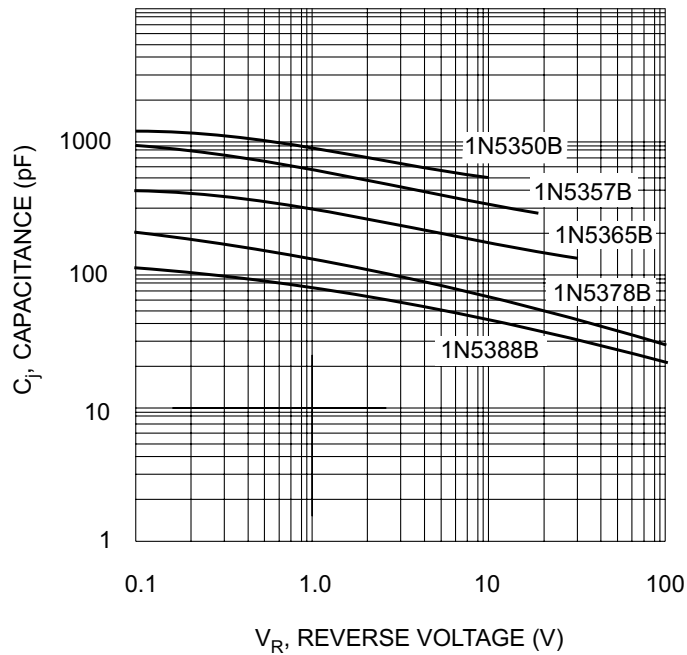


Fig. 1, Typ. Capacitance vs. Reverse Voltage

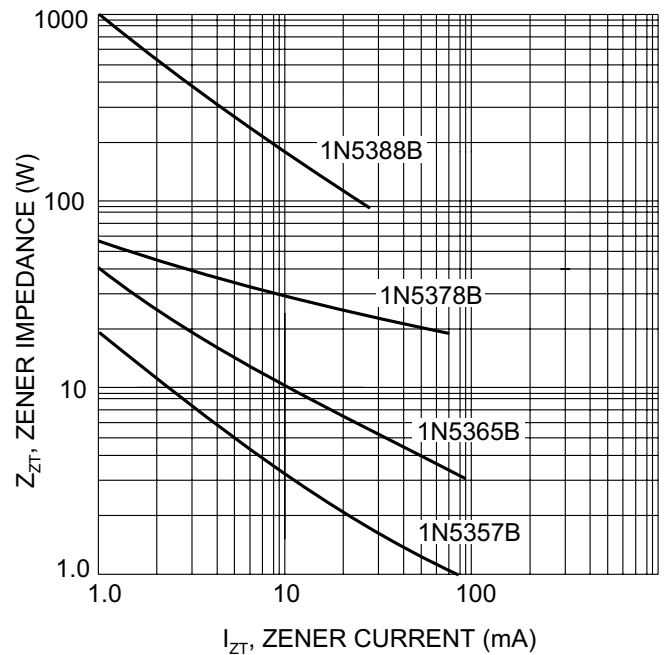


Fig. 2, Typ. Zener Impedance vs. Zener Current

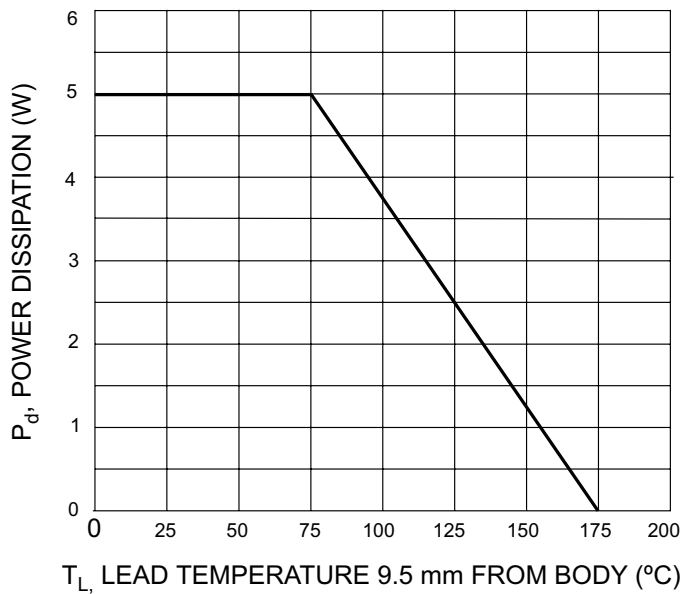


Fig. 3, Power Derating Curve