

查询JAN1N966B供应商

捷多邦, 专业PCB打样工厂, 24小时

加急出货

**1N957B  
thru  
1N992B  
DO-7**



**Microsemi Corp.**  
The diode experts

SCOTTSDALE, AZ  
For more information call:  
(602) 941-6300

**FEATURES**

- 6.8 TO 200V ZENER VOLTAGE RANGE
- 1N962B THRU 1N992B HAVE JAN, JANTX AND JANTXV QUALIFICATIONS TO MIL-S-19500/117
- 1N962B THRU 1N973B HAVE S1N QUALIFICATION

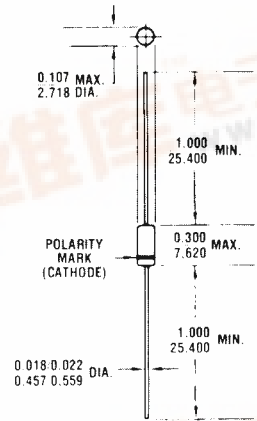
**MAXIMUM RATINGS**

Steady State Power Dissipation: 400 mW  
Operating and Storage Temperatures: -65°C to +175°C  
Derating Factor Above 50°C: 3.2 mW/°C  
Forward Voltage @ 200 mA: 1.5 Volts

**SILICON  
400 mW  
ZENER DIODES**

**\* ELECTRICAL CHARACTERISTICS @ 25°C**

| JEDEC TYPE NUMBER (Note 1) | NOMINAL ZENER VOLTAGE (Note 2) Vz | ZENER TEST CURRENT IzT | MAX. ZENER IMPEDANCE (Note 3) |           | MAX. DC ZENER CURRENT (Note 4) IzM | MAX. SURGE CURRENT (RECURRENT) (Note 5) Iz (SURGE) | MAX. REVERSE LEAKAGE CURRENT |       | MAX. TEMP. COEFFICIENT αVz |        |
|----------------------------|-----------------------------------|------------------------|-------------------------------|-----------|------------------------------------|--|------------------------------|-------|----------------------------|--------|
|                            |                                   |                        | Zz1 @ IzT                     | Zz2 @ IzT |                                    |  | Iz                           | Vz    |                            |        |
|                            | VOLTS                             | mA                     | OHMS                          | OHMS      | mA                                 | mA   | μA                           | VOLTS | %/°C                       |        |
| 1N957B                     | 6.8                               | 18.5                   | 4.5                           | 700       | 1.0                                | 55   | 300                          | 150   | 5.2                        | +0.05  |
| 1N958B                     | 7.5                               | 16.5                   | 5.5                           | 700       | .5                                 | 50   | 275                          | 75    | 5.7                        | +0.058 |
| 1N959B                     | 8.2                               | 15.0                   | 6.5                           | 700       | .5                                 | 45   | 250                          | 50    | 6.2                        | +0.065 |
| 1N960B                     | 9.1                               | 14.0                   | 7.5                           | 700       | .5                                 | 41   | 225                          | 25    | 6.9                        | +0.068 |
| 1N961B                     | 10                                | 12.5                   | 8.5                           | 700       | .25                                | 38   | 200                          | 10    | 7.6                        | +0.075 |
| 1N962B                     | 11                                | 11.5                   | 9.5                           | 700       | .25                                | 32   | 175                          | 5     | 8.4                        | +0.076 |
| 1N963B                     | 12                                | 10.5                   | 11.5                          | 700       | .25                                | 31   | 160                          | 5     | 9.1                        | +0.077 |
| 1N964B                     | 13                                | 9.5                    | 13.0                          | 700       | .25                                | 28   | 150                          | 5     | 9.9                        | +0.079 |
| 1N965B                     | 15                                | 8.5                    | 16                            | 700       | .25                                | 25   | 130                          | 5     | 11.4                       | +0.082 |
| 1N966B                     | 16                                | 7.8                    | 17                            | 700       | .25                                | 24   | 120                          | 5     | 12.2                       | +0.083 |
| 1N967B                     | 18                                | 7.0                    | 21                            | 750       | .25                                | 20   | 110                          | 5     | 13.7                       | +0.085 |
| 1N968B                     | 20                                | 6.2                    | 25                            | 750       | .25                                | 18   | 100                          | 5     | 15.2                       | +0.086 |
| 1N969B                     | 22                                | 5.6                    | 29                            | 750       | .25                                | 16   | 90                           | 5     | 16.7                       | +0.087 |
| 1N970B                     | 24                                | 5.2                    | 33                            | 750       | .25                                | 15   | 80                           | 5     | 18.2                       | +0.088 |
| 1N971B                     | 27                                | 4.6                    | 41                            | 750       | .25                                | 13   | 70                           | 5     | 20.6                       | +0.090 |
| 1N972B                     | 30                                | 4.2                    | 49                            | 1000      | .25                                | 12   | 65                           | 5     | 22.8                       | +0.091 |
| 1N973B                     | 33                                | 3.8                    | 58                            | 1000      | .25                                | 11   | 60                           | 5     | 25.1                       | +0.092 |
| 1N974B                     | 36                                | 3.4                    | 70                            | 1000      | .25                                | 10   | 55                           | 5     | 27.4                       | +0.093 |
| 1N975B                     | 39                                | 3.2                    | 80                            | 1000      | .25                                | 9.5  | 46                           | 5     | 29.7                       | +0.094 |
| 1N976B                     | 43                                | 3.0                    | 93                            | 1500      | .25                                | 8.8  | 44                           | 5     | 32.7                       | +0.095 |
| 1N977B                     | 47                                | 2.7                    | 105                           | 1500      | .25                                | 7.9  | 40                           | 5     | 35.8                       | +0.095 |
| 1N978B                     | 51                                | 2.5                    | 125                           | 1500      | .25                                | 7.4  | 37                           | 5     | 38.8                       | +0.096 |
| 1N979B                     | 56                                | 2.2                    | 150                           | 2000      | .25                                | 6.8  | 35                           | 5     | 42.6                       | +0.096 |
| 1N980B                     | 62                                | 2.0                    | 185                           | 2000      | .25                                | 6.0  | 30                           | 5     | 47.1                       | +0.097 |
| 1N981B                     | 68                                | 1.8                    | 230                           | 2000      | .25                                | 5.5  | 28                           | 5     | 51.7                       | +0.097 |
| 1N982B                     | 75                                | 1.7                    | 270                           | 2000      | .25                                | 5.0  | 26                           | 5     | 56.0                       | +0.098 |
| 1N983B                     | 87                                | 1.5                    | 330                           | 3000      | .25                                | 4.6  | 23                           | 5     | 62.2                       | +0.098 |
| 1N984B                     | 91                                | 1.4                    | 400                           | 3000      | .25                                | 4.1  | 21                           | 5     | 69.2                       | +0.099 |
| 1N985B                     | 100                               | 1.3                    | 500                           | 3000      | .25                                | 3.7  | 18                           | 5     | 76.0                       | +0.11  |
| 1N986B                     | 110                               | 1.1                    | 750                           | 4000      | .25                                | 3.3  | 16                           | 5     | 83.6                       | +0.11  |
| 1N987B                     | 120                               | 1.0                    | 900                           | 4500      | .25                                | 3.1  | 15                           | 5     | 91.2                       | +0.11  |
| 1N988B                     | 130                               | 0.95                   | 1100                          | 5000      | .25                                | 2.7  | 13                           | 5     | 98.8                       | +0.11  |
| 1N989B                     | 150                               | 0.85                   | 1500                          | 6000      | .25                                | 2.4  | 12                           | 5     | 114.0                      | +0.11  |
| 1N990B                     | 160                               | 0.80                   | 1700                          | 6500      | .25                                | 2.2  | 11                           | 5     | 121.6                      | +0.11  |
| 1N991B                     | 180                               | 0.64                   | 2200                          | 7100      | .25                                | 2.0  | 10                           | 5     | 136.8                      | +0.11  |
| 1N992B                     | 200                               | 0.65                   | 2500                          | 8000      | .25                                | 1.8  | 9                            | 5     | 152.0                      | +0.11  |



**FIGURE 1**  
INCH  
All dimensions in m.m.

**MECHANICAL CHARACTERISTICS**

- CASE: Hermetically sealed glass case, DO-7.
- FINISH: All external surfaces are corrosion resistant and leads solderable.
- THERMAL RESISTANCE: 300°C/W (Typical) junction to lead at 0.375-inches from body.
- POLARITY: Diode to be operated with the banded end positive with respect to the opposite end.
- WEIGHT: 0.2 grams.
- MOUNTING POSITION: Any.

# 1N957B thru 1N992B DO-7

**NOTE 1** The JEDEC type numbers shown (B suffix) have a  $\pm 5\%$  tolerance on nominal zener voltage. The suffix A is used to identify  $\pm 10\%$  tolerance; suffix C is used to identify  $\pm 2\%$ ; and suffix D is used to identify  $\pm 1\%$  tolerance; no suffix indicates  $\pm 20\%$  tolerance.

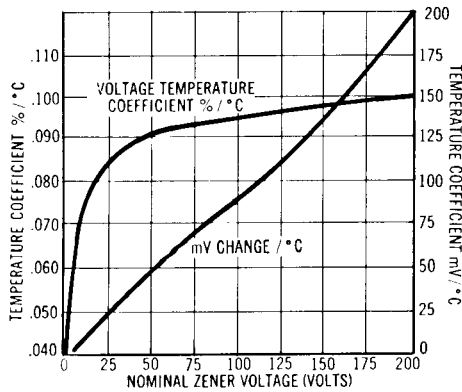
**NOTE 2** Zener voltage ( $V_Z$ ) is measured after the test current has been applied for  $20 \pm 5$  seconds. The device shall be suspended by its leads with the inside edge of the mounting clips between .375" and .500" from the body. Mounting clips shall be maintained at a temperature of  $25 +8/-2^\circ\text{C}$ .

**NOTE 3** The zener impedance is derived from the 60 cycle A.C. voltage, which results when an A.C. current

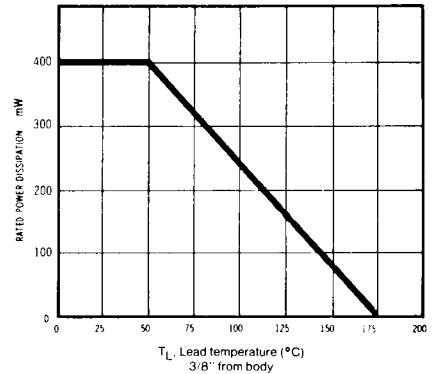
having an R.M.S. value equal to 10% of the D.C. zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed on  $I_{ZT}$  or  $I_{ZK}$ . Zener impedance is measured at 2 points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

**NOTE 4** The values of  $I_{ZM}$  are calculated for a  $\pm 5\%$  tolerance on nominal zener voltage. Allowance has been made for the rise in zener voltage above  $V_{ZT}$  which results from zener impedance and the increase in junction temperature as power dissipation approaches 400 mW. In the case of individual diodes  $I_{ZM}$  is that value of current which results in a dissipation of 400 mW at  $50^\circ\text{C}$  lead temperature at  $3/8"$  from body.

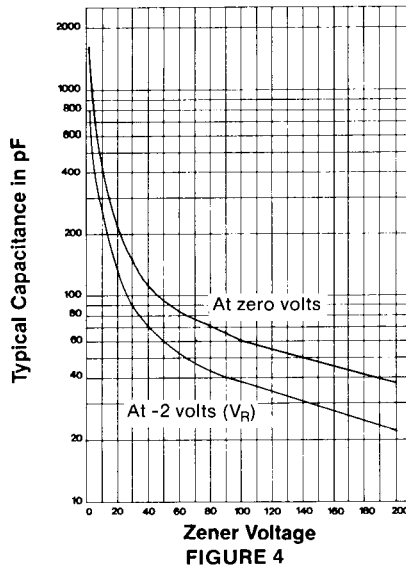
**NOTE 5** Surge is 1/2 square wave or equivalent sine wave pulse of 1/120 sec. duration.



**FIGURE 2**  
ZENER VOLTAGE TEMPERATURE  
COEFF. vs. ZENER VOLTAGE



**FIGURE 3**  
POWER DERATING CURVE



**FIGURE 4**