

1N957B THRU 1N992B

**SILICON ZENER DIODE**  
**6.8 VOLTS THRU 200 VOLTS**  
**500mW, 5% TOLERANCE**



[www.centra-semi.com](http://www.centra-semi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 1N957B Series Silicon Zener Diode is a high quality voltage regulator designed for use in industrial, commercial, entertainment and computer applications.



**DO-35 CASE**

**MAXIMUM RATINGS:** ( $T_L=75^{\circ}\text{C}$ )

Power Dissipation

Operating and Storage Junction Temperature

$V_Z$  Tolerance: Part number with "B" suffix

$V_Z$  Tolerance: Part number with "C" suffix

$V_Z$  Tolerance: Part number with "D" suffix

**SYMBOL**

$P_D$

$T_J, T_{stg}$

500

-65 to +200

$\pm 5$

$\pm 2$

$\pm 1$

**UNITS**

mW

$^{\circ}\text{C}$

%

%

%

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^{\circ}\text{C}$ )  $V_F=1.5\text{V MAX @ } I_F=200\text{mA}$  (for all types)

| TYPE   | ZENER VOLTAGE<br>V <sub>Z</sub> @ I <sub>ZT</sub> |          |          | TEST CURRENT<br>I <sub>ZT</sub><br>mA | MAXIMUM ZENER IMPEDANCE                |                                        |                                       | MAXIMUM REVERSE CURRENT |      | MAXIMUM ZENER CURRENT<br>I <sub>ZM</sub><br>mA |
|--------|---------------------------------------------------|----------|----------|---------------------------------------|----------------------------------------|----------------------------------------|---------------------------------------|-------------------------|------|------------------------------------------------|
|        | MIN<br>V                                          | NOM<br>V | MAX<br>V |                                       | Z <sub>ZT</sub> @ I <sub>ZT</sub><br>Ω | Z <sub>ZK</sub> @ I <sub>ZK</sub><br>Ω | I <sub>R</sub> @ V <sub>R</sub><br>μA | V <sub>R</sub><br>V     |      |                                                |
|        |                                                   |          |          |                                       |                                        |                                        |                                       |                         |      |                                                |
| 1N957B | 6.460                                             | 6.8      | 7.140    | 18.5                                  | 4.5                                    | 700                                    | 1.00                                  | 150                     | 5.2  | 47                                             |
| 1N958B | 7.125                                             | 7.5      | 7.875    | 16.5                                  | 5.5                                    | 700                                    | 0.50                                  | 75                      | 5.7  | 42                                             |
| 1N959B | 7.790                                             | 8.2      | 8.610    | 15.0                                  | 6.5                                    | 700                                    | 0.50                                  | 50                      | 6.2  | 38                                             |
| 1N960B | 8.645                                             | 9.1      | 9.555    | 14.0                                  | 7.5                                    | 700                                    | 0.50                                  | 25                      | 6.9  | 35                                             |
| 1N961B | 9.500                                             | 10       | 10.50    | 12.5                                  | 8.5                                    | 700                                    | 0.25                                  | 10                      | 7.6  | 32                                             |
| 1N962B | 10.45                                             | 11       | 11.55    | 11.5                                  | 9.5                                    | 700                                    | 0.25                                  | 5.0                     | 8.4  | 28                                             |
| 1N963B | 11.40                                             | 12       | 12.60    | 10.5                                  | 11.5                                   | 700                                    | 0.25                                  | 5.0                     | 9.1  | 26                                             |
| 1N964B | 12.35                                             | 13       | 13.65    | 9.5                                   | 13.0                                   | 700                                    | 0.25                                  | 5.0                     | 9.9  | 24                                             |
| 1N965B | 14.25                                             | 15       | 15.75    | 8.5                                   | 16.0                                   | 700                                    | 0.25                                  | 5.0                     | 11.4 | 21                                             |
| 1N966B | 15.20                                             | 16       | 16.80    | 7.8                                   | 17.0                                   | 700                                    | 0.25                                  | 5.0                     | 12.2 | 19                                             |
| 1N967B | 17.10                                             | 18       | 18.90    | 7.0                                   | 21.0                                   | 750                                    | 0.25                                  | 5.0                     | 13.7 | 17                                             |
| 1N968B | 19.00                                             | 20       | 21.00    | 6.2                                   | 25.0                                   | 750                                    | 0.25                                  | 5.0                     | 15.2 | 15                                             |
| 1N969B | 20.90                                             | 22       | 23.10    | 5.6                                   | 29.0                                   | 750                                    | 0.25                                  | 5.0                     | 16.7 | 14                                             |
| 1N970B | 22.80                                             | 24       | 25.20    | 5.2                                   | 33.0                                   | 750                                    | 0.25                                  | 5.0                     | 18.2 | 13                                             |
| 1N971B | 25.65                                             | 27       | 28.35    | 4.6                                   | 41.0                                   | 750                                    | 0.25                                  | 5.0                     | 20.6 | 11                                             |
| 1N972B | 28.50                                             | 30       | 31.50    | 4.2                                   | 49.0                                   | 1000                                   | 0.25                                  | 5.0                     | 22.8 | 10                                             |
| 1N973B | 31.35                                             | 33       | 34.65    | 3.8                                   | 58.0                                   | 1000                                   | 0.25                                  | 5.0                     | 25.1 | 9.2                                            |
| 1N974B | 34.20                                             | 36       | 37.80    | 3.4                                   | 70.0                                   | 1000                                   | 0.25                                  | 5.0                     | 27.4 | 8.5                                            |
| 1N975B | 37.05                                             | 39       | 40.95    | 3.2                                   | 80.0                                   | 1000                                   | 0.25                                  | 5.0                     | 29.7 | 7.8                                            |
| 1N976B | 40.85                                             | 43       | 45.15    | 3.0                                   | 93.0                                   | 1500                                   | 0.25                                  | 5.0                     | 32.7 | 7.0                                            |
| 1N977B | 44.65                                             | 47       | 49.35    | 2.7                                   | 105                                    | 1500                                   | 0.25                                  | 5.0                     | 35.8 | 6.4                                            |
| 1N978B | 48.45                                             | 51       | 53.55    | 2.5                                   | 125                                    | 2000                                   | 0.25                                  | 5.0                     | 38.8 | 5.9                                            |
| 1N979B | 53.20                                             | 56       | 58.80    | 2.2                                   | 150                                    | 2000                                   | 0.25                                  | 5.0                     | 42.6 | 5.4                                            |
| 1N980B | 58.90                                             | 62       | 65.10    | 2.0                                   | 185                                    | 2000                                   | 0.25                                  | 5.0                     | 47.1 | 4.9                                            |
| 1N981B | 64.60                                             | 68       | 71.40    | 1.8                                   | 230                                    | 2000                                   | 0.25                                  | 5.0                     | 51.7 | 4.5                                            |
| 1N982B | 71.25                                             | 75       | 78.75    | 1.7                                   | 270                                    | 2000                                   | 0.25                                  | 5.0                     | 56.0 | 4.0                                            |

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# 1N957B THRU 1N992B

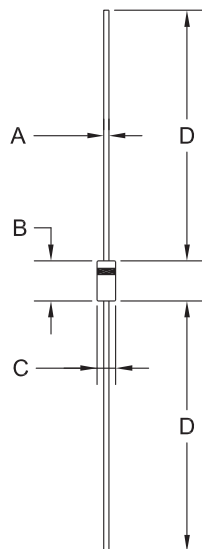
**SILICON ZENER DIODE  
6.8 VOLTS THRU 200 VOLTS  
500mW, 5% TOLERANCE**



**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^{\circ}\text{C}$ )  $V_F=1.5\text{V MAX @ } I_F=200\text{mA}$  (for all types)

| TYPE   | ZENER VOLTAGE<br>$V_Z @ I_{ZT}$ |     |       | TEST CURRENT<br>$I_{ZT}$<br>mA | MAXIMUM ZENER IMPEDANCE |                   |      | MAXIMUM REVERSE CURRENT |       | MAXIMUM ZENER CURRENT<br>$I_{ZM}$<br>mA |
|--------|---------------------------------|-----|-------|--------------------------------|-------------------------|-------------------|------|-------------------------|-------|-----------------------------------------|
|        | MIN                             | NOM | MAX   |                                | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ |      | $I_R @ V_R$             |       |                                         |
|        | V                               | V   | V     |                                | $\Omega$                | $\Omega$          | mA   | $\mu\text{A}$           | V     |                                         |
| 1N983B | 77.90                           | 82  | 86.10 | 1.5                            | 330                     | 3000              | 0.25 | 5.0                     | 62.2  | 3.7                                     |
| 1N984B | 86.45                           | 91  | 95.55 | 1.4                            | 400                     | 3000              | 0.25 | 5.0                     | 69.2  | 3.3                                     |
| 1N985B | 95.00                           | 100 | 105.0 | 1.3                            | 500                     | 3000              | 0.25 | 5.0                     | 76.0  | 3.0                                     |
| 1N986B | 104.5                           | 110 | 115.5 | 1.1                            | 750                     | 4000              | 0.25 | 5.0                     | 83.6  | 2.7                                     |
| 1N987B | 114.0                           | 120 | 126.0 | 1.0                            | 900                     | 4500              | 0.25 | 5.0                     | 91.2  | 2.5                                     |
| 1N988B | 123.5                           | 130 | 136.5 | 0.95                           | 1100                    | 5000              | 0.25 | 5.0                     | 98.8  | 2.3                                     |
| 1N989B | 142.5                           | 150 | 157.5 | 0.85                           | 1500                    | 6000              | 0.25 | 5.0                     | 114.0 | 2.0                                     |
| 1N990B | 152.0                           | 160 | 168.0 | 0.80                           | 1700                    | 6500              | 0.25 | 5.0                     | 121.6 | 1.9                                     |
| 1N991B | 171.0                           | 180 | 189.0 | 0.68                           | 2200                    | 7100              | 0.25 | 5.0                     | 136.8 | 1.7                                     |
| 1N992B | 190.0                           | 200 | 210.0 | 0.65                           | 2500                    | 8000              | 0.25 | 5.0                     | 152.0 | 1.5                                     |

## DO-35 CASE - MECHANICAL OUTLINE



R1

| DIMENSIONS |        |       |             |      |
|------------|--------|-------|-------------|------|
| SYMBOL     | INCHES |       | MILLIMETERS |      |
|            | MIN    | MAX   | MIN         | MAX  |
| A          | 0.018  | 0.022 | 0.46        | 0.56 |
| B          | 0.120  | 0.200 | 3.05        | 5.08 |
| C          | 0.060  | 0.090 | 1.52        | 2.29 |
| D          | 1.000  | -     | 25.40       | -    |

DO-35 (REV: R1)

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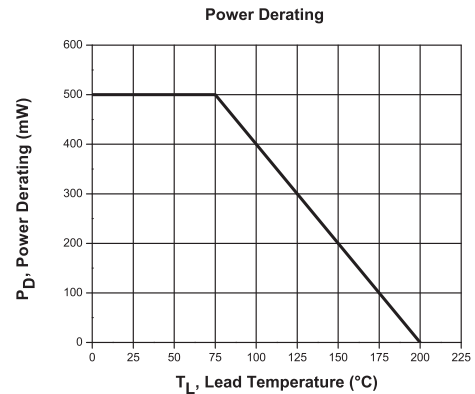
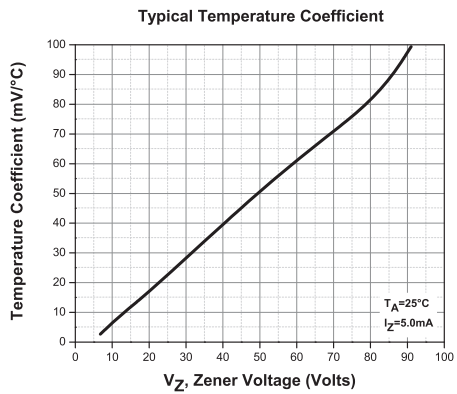
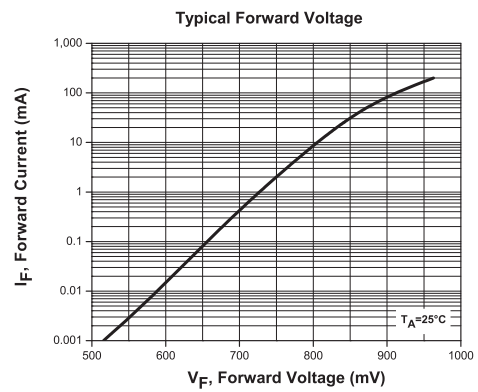
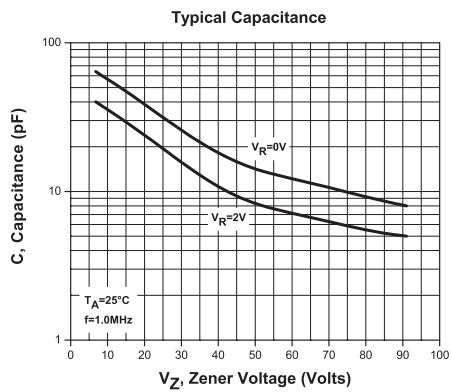
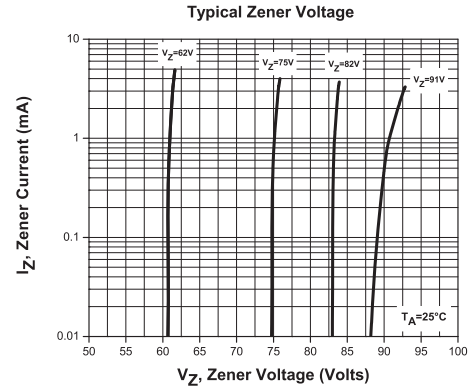
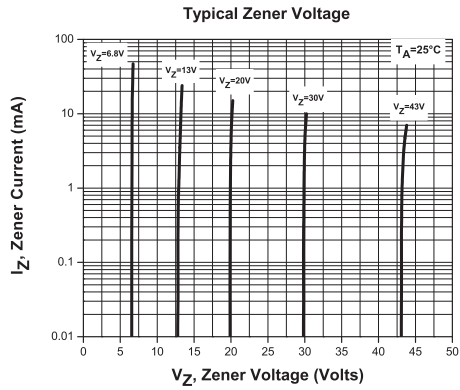
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**500mW, 5% TOLERANCE**



**TYPICAL ELECTRICAL CHARACTERISTICS**



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- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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Электрон  
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