

1N957B THRU 1N992B

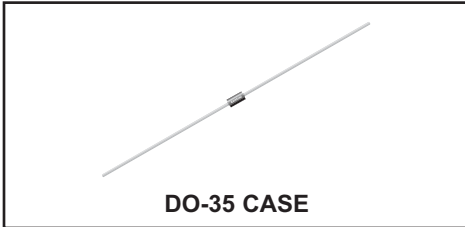
SILICON ZENER DIODE
6.8 VOLTS THRU 200 VOLTS
500mW, 5% TOLERANCE



www.centrasemi.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 | 500 |
| T_J, T_{stg} | -65 to +200 |
| | ± 5 |
| | ± 2 |
| | ± 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 $V_Z @ I_{ZT}$ | | | TEST CURRENT | MAXIMUM ZENER IMPEDANCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM ZENER CURRENT |
|--------|---------------------------------|-----|-------|--------------|-------------------------|-------------------|---------------|-------------------------|------|-----------------------|
| | MIN | NOM | MAX | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | $I_R @ V_R$ | I_{ZM} | | |
| | V | V | V | mA | Ω | Ω | μA | V | mA | |
| 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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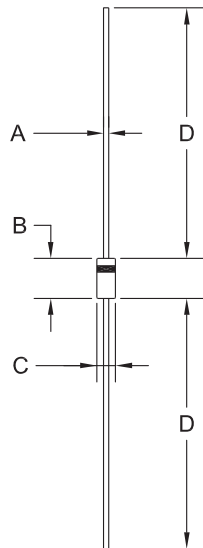
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500mW, 5% TOLERANCE



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 $V_Z @ I_{ZT}$ | | | TEST CURRENT I_{ZT} mA | MAXIMUM ZENER IMPEDANCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM ZENER CURRENT I_{ZM} mA |
|--------|---------------------------------|-----|-------|--------------------------------|-------------------------------|-------------------------------|------------------------------|-------------------------|-------|---|
| | MIN | NOM | MAX | | $Z_{ZT} @ I_{ZT}$ Ω | $Z_{ZK} @ I_{ZK}$ Ω | $I_R @ V_R$ μA | V | | |
| | V | V | 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

| 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 | - |

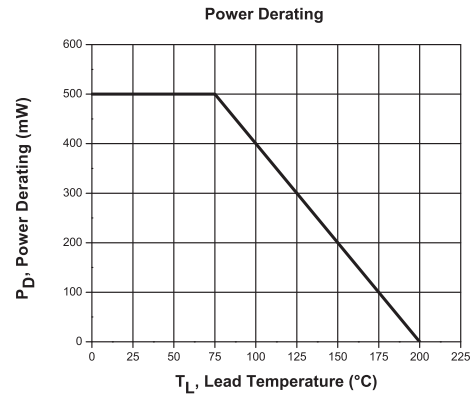
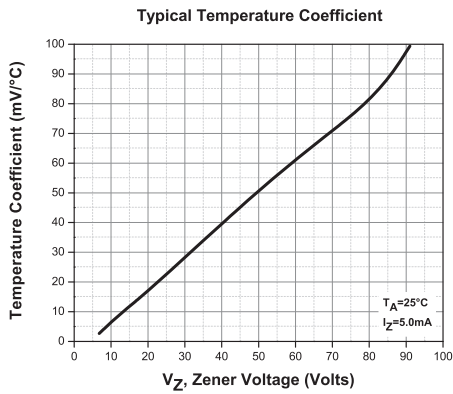
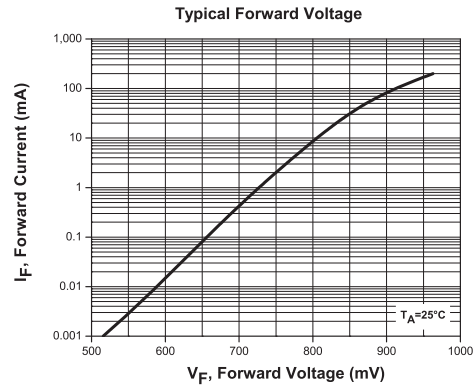
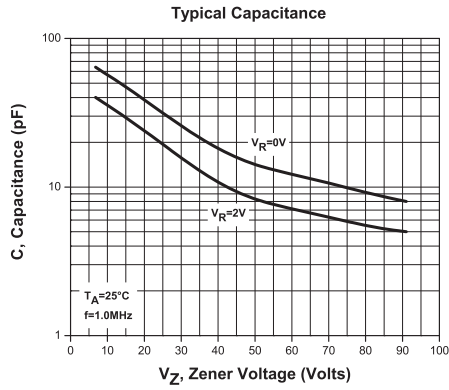
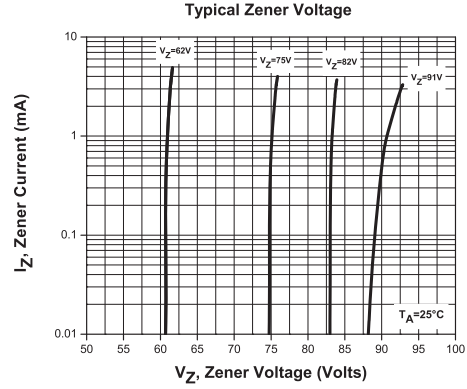
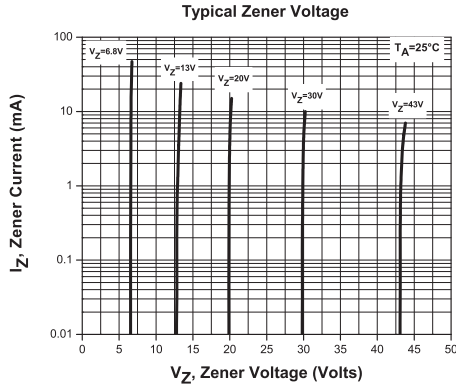
DO-35 (REV: R1)

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TYPICAL ELECTRICAL CHARACTERISTICS



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