

New Jersey Semi-Conductor Products, Inc.

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ABSOLUTE MAXIMUM RATINGS:
 Power Dissipation (@ $T_C=75^\circ\text{C}$)
 Operating and Storage Temperature

SYMBOL
 P_D
 T_J, T_{stg}

50
 -65 to +175

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

ELECTRICAL CHARACTERISTICS: ($T_C=30^\circ\text{C}$), $V_F=1.5\text{V MAX @ } I_F=10\text{A}$ FOR ALL TYPES.

| Type No. | Zener Voltage $V_Z @ I_{ZT}$ | | | Test Current I_{ZT} | Maximum Zener Impedance | | | Maximum Reverse Current | | Maximum DC Zener Current @ $T_C=75^\circ\text{C}$ I_{ZM} | Typical Zener Voltage Temperature Coefficient |
|----------|---------------------------------|-------|-------|--------------------------|-------------------------|-------------------|-------------|-------------------------|-------|--|---|
| | MIN | NOM | MAX | | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | $I_R @ V_R$ | V_R | | | |
| | Volts | Volts | Volts | mA | Ω | Ω | mA | μA | Volts | mA | $\% / ^\circ\text{C}$ |
| 1N3305B | 6.460 | 6.8 | 7.140 | 1850 | 0.2 | 70 | 5.0 | 150 | 4.5 | 6600 | .040 |
| 1N3306B | 7.125 | 7.5 | 7.875 | 1700 | 0.3 | 70 | 5.0 | 75 | 5.0 | 5900 | .045 |
| 1N3307B | 7.790 | 8.2 | 8.610 | 1500 | 0.4 | 70 | 5.0 | 50 | 5.4 | 5200 | .048 |
| 1N3308B | 8.645 | 9.1 | 9.555 | 1370 | 0.5 | 70 | 5.0 | 25 | 6.1 | 4800 | .051 |
| 1N3309B | 9.500 | 10 | 10.50 | 1200 | 0.6 | 80 | 5.0 | 10 | 6.7 | 4300 | .055 |
| 1N3310B | 10.45 | 11 | 11.55 | 1100 | 0.8 | 80 | 5.0 | 5.0 | 8.4 | 3900 | .060 |
| 1N3311B | 11.40 | 12 | 12.60 | 1000 | 1.0 | 80 | 5.0 | 5.0 | 9.1 | 3600 | .065 |
| 1N3312B | 12.35 | 13 | 13.65 | 960 | 1.1 | 80 | 5.0 | 5.0 | 9.9 | 3300 | .065 |
| 1N3313B | 13.30 | 14 | 14.70 | 890 | 1.2 | 80 | 5.0 | 5.0 | 10.6 | 3000 | .070 |
| 1N3314B | 14.25 | 15 | 15.75 | 830 | 1.4 | 80 | 5.0 | 5.0 | 11.4 | 2800 | .070 |
| 1N3315B | 15.20 | 16 | 16.80 | 780 | 1.6 | 80 | 5.0 | 5.0 | 12.2 | 2650 | .070 |
| 1N3316B | 16.15 | 17 | 17.85 | 740 | 1.8 | 80 | 5.0 | 5.0 | 13.0 | 2500 | .075 |
| 1N3317B | 17.10 | 18 | 18.90 | 700 | 2.0 | 80 | 5.0 | 5.0 | 13.7 | 2300 | .075 |
| 1N3318B | 18.05 | 19 | 19.95 | 660 | 2.2 | 80 | 5.0 | 5.0 | 14.4 | 2200 | .075 |
| 1N3319B | 19.00 | 20 | 21.00 | 630 | 2.4 | 80 | 5.0 | 5.0 | 15.2 | 2100 | .075 |
| 1N3320B | 20.90 | 22 | 23.10 | 570 | 2.5 | 80 | 5.0 | 5.0 | 16.7 | 1900 | .080 |
| 1N3321B | 22.80 | 24 | 25.20 | 520 | 2.6 | 80 | 5.0 | 5.0 | 18.2 | 1750 | .080 |
| 1N3322B | 23.75 | 25 | 26.25 | 500 | 2.7 | 90 | 5.0 | 5.0 | 19.0 | 1550 | .080 |
| 1N3323B | 25.65 | 27 | 28.35 | 460 | 2.8 | 90 | 5.0 | 5.0 | 20.6 | 1500 | .085 |
| 1N3324B | 28.50 | 30 | 31.50 | 420 | 3.0 | 90 | 5.0 | 5.0 | 22.8 | 1400 | .085 |
| 1N3325B | 31.35 | 33 | 34.65 | 380 | 3.2 | 90 | 5.0 | 5.0 | 25.1 | 1300 | .085 |
| 1N3326B | 34.20 | 36 | 37.80 | 350 | 3.5 | 90 | 5.0 | 5.0 | 27.4 | 1150 | .085 |
| 1N3327B | 37.05 | 39 | 40.95 | 320 | 4.0 | 90 | 5.0 | 5.0 | 29.7 | 1050 | .090 |
| 1N3328B | 40.85 | 43 | 45.15 | 290 | 4.5 | 90 | 5.0 | 5.0 | 32.7 | 975 | .090 |
| 1N3329B | 42.75 | 45 | 47.25 | 280 | 4.5 | 100 | 5.0 | 5.0 | 34.2 | 930 | .090 |
| 1N3330B | 44.65 | 47 | 49.35 | 270 | 5.0 | 100 | 5.0 | 5.0 | 35.8 | 880 | .090 |

NO SUFFIX = 20% TOLERANCE

A SUFFIX = 10% TOLERANCE

B SUFFIX = 5% TOLERANCE

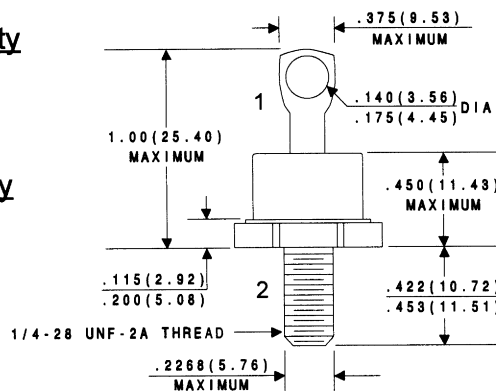
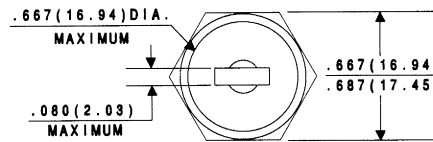
1N3305B THRU 1N3350B

ZENER DIODE

ELECTRICAL CHARACTERISTICS: ($T_C=30^\circ\text{C}$), $V_F=1.5\text{V MAX @ } I_F=10\text{A}$ FOR ALL TYPES.

| Type No. | Zener Voltage $V_Z @ I_{ZT}$ | | | Test Current | Maximum Zener Impedance | | | Maximum Reverse Current | | Maximum DC Zener Current $@ T_C=75^\circ\text{C}$ | Typical Zener Voltage Temperature Coefficient |
|----------|---------------------------------|-------|--------|--------------|-------------------------|-------------------|-------------------|-------------------------|----------|--|---|
| | MIN | NOM | MAX | | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | $I_R @ V_R$ | I_{ZM} | | |
| | Volts | Volts | Volts | | mA | Ω | Ω | μA | Volts | | |
| 1N3331B | 47.50 | 50 | 52.50 | 250 | 5.0 | 100 | 5.0 | 5.0 | 38.0 | 830 | .090 |
| 1N3332B | 48.45 | 51 | 53.55 | 245 | 5.2 | 100 | 5.0 | 5.0 | 38.8 | 810 | .090 |
| 1N3333B | 49.40 | 52 | 54.60 | 240 | 5.5 | 100 | 5.0 | 5.0 | 39.5 | 790 | .090 |
| 1N3334B | 53.20 | 56 | 58.80 | 220 | 6.0 | 110 | 5.0 | 5.0 | 42.6 | 740 | .090 |
| 1N3335B | 58.90 | 62 | 65.10 | 200 | 7.0 | 120 | 5.0 | 5.0 | 47.1 | 660 | .090 |
| 1N3336B | 64.60 | 68 | 71.40 | 180 | 8.0 | 140 | 5.0 | 5.0 | 51.7 | 600 | .090 |
| 1N3337B | 71.25 | 75 | 78.75 | 170 | 9.0 | 150 | 5.0 | 5.0 | 56.0 | 540 | .090 |
| 1N3338B | 77.90 | 82 | 86.10 | 150 | 11 | 160 | 5.0 | 5.0 | 62.2 | 490 | .090 |
| 1N3339B | 86.45 | 91 | 95.55 | 140 | 15 | 180 | 5.0 | 5.0 | 69.2 | 420 | .090 |
| 1N3340B | 95.00 | 100 | 105.00 | 120 | 20 | 200 | 5.0 | 5.0 | 76.0 | 400 | .090 |
| 1N3341B | 99.75 | 105 | 110.25 | 120 | 25 | 210 | 5.0 | 5.0 | 79.8 | 380 | .095 |
| 1N3342B | 104.50 | 110 | 115.50 | 110 | 30 | 220 | 5.0 | 5.0 | 83.6 | 365 | .095 |
| 1N3343B | 114.00 | 120 | 126.00 | 100 | 40 | 240 | 5.0 | 5.0 | 91.2 | 335 | .095 |
| 1N3344B | 123.50 | 130 | 136.50 | 95 | 50 | 275 | 5.0 | 5.0 | 98.8 | 310 | .095 |
| 1N3345B | 133.00 | 140 | 147.00 | 90 | 60 | 325 | 5.0 | 5.0 | 106.4 | 290 | .095 |
| 1N3346B | 142.50 | 150 | 157.50 | 85 | 75 | 400 | 5.0 | 5.0 | 114.0 | 270 | .095 |
| 1N3347B | 152.00 | 160 | 168.00 | 80 | 80 | 450 | 5.0 | 5.0 | 121.6 | 250 | .095 |
| 1N3348B | 166.25 | 175 | 183.75 | 70 | 85 | 500 | 5.0 | 5.0 | 133.0 | 230 | .095 |
| 1N3349B | 171.00 | 180 | 189.00 | 68 | 90 | 525 | 5.0 | 5.0 | 136.8 | 220 | .095 |
| 1N3350B | 190.00 | 200 | 210.00 | 65 | 100 | 600 | 5.0 | 5.0 | 152.0 | 200 | .100 |

DO-5 MECHANICAL OUTLINE



Standard Polarity

- 1) Cathode
- 2) Anode

Reverse Polarity

- 1) Anode
- 2) Cathode

All Dimensions in Inches (mm).