



Microsemi Corp.
The diode experts

SCOTTSDALE, AZ
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(602) 941-6300

**1N746 thru
1N759A
and
1N4370 thru
1N4372A
DO-7**

1% and 2% VERSIONS
"C" and "D" AVAILABLE

FEATURES

- ZENER VOLTAGE 2.4V to 12.0V
- AVAILABLE IN JAN, JANTX and JANTXV QUALIFICATIONS TO MIL-S-19500/127
- 1N746A THRU 1N759A HAVE S1N QUALIFICATION

MAXIMUM RATINGS

Junction and Storage Temperatures: -65°C to +175°C
DC Power Dissipation: 400 mW
Power Derating: 3.2 mW/°C above 50°C
Forward Voltage @ 200 mA: 1.5 Volts

ELECTRICAL CHARACTERISTICS @ 25°C

| JEDEC TYPE NO. (NOTE 1) | NOMINAL ZENER VOLTAGE V_Z @ I_{ZT} (NOTE 2) | ZENER TEST CURRENT I_{ZT} | MAXIMUM ZENER IMPEDANCE Z_{ZT} @ I_{ZT} (NOTE 3) | MAXIMUM REVERSE CURRENT @ $V_R = 1$ VOLT | | MAXIMUM ZENER CURRENT I_{ZM} (NOTE 4) | TYPICAL TEMP COEFF OF ZENER VOLTAGE α_{VZ} |
|----------------------------------|--|-----------------------------|---|--|----------------------|--|---|
| | | | | @ 25°C | @ +150°C | | |
| | | | | μA | μA | | |
| | VOLTS | mA | OHMS | μA | μA | mA | %/°C |
| 1N4370 1N4371 1N4372 | 2.4 2.7 3.0 | 20 20 20 | 30 30 29 | 100 75 50 | 200 150 100 | 150 135 120 | -.085 -.080 -.075 |
| 1N746 1N747 1N748 | 3.3 3.6 3.9 | 20 20 20 | 28 24 23 | 10 10 10 | 30 30 30 | 110 100 95 | -.066 -.058 -.046 |
| 1N749 1N750 1N751 1N752 | 4.3 4.7 5.1 5.6 | 20 20 20 20 | 22 19 17 11 | 2 2 1 1 | 30 30 20 20 | 85 75 70 65 | -.033 -.015 ±.010 +.030 |
| 1N753 1N754 1N755 1N756 | 6.2 6.8 7.5 8.2 | 20 20 20 20 | 7 5 6 8 | .1 .1 .1 .1 | 20 20 20 20 | 60 55 50 45 | +.049 +.053 +.057 +.060 |
| 1N757 1N758 1N759 | 9.1 10.0 12.0 | 20 20 20 | 10 17 30 | .1 .1 .1 | 20 20 20 | 40 35 30 | +.061 +.062 +.062 |

*JEDEC Registered Data

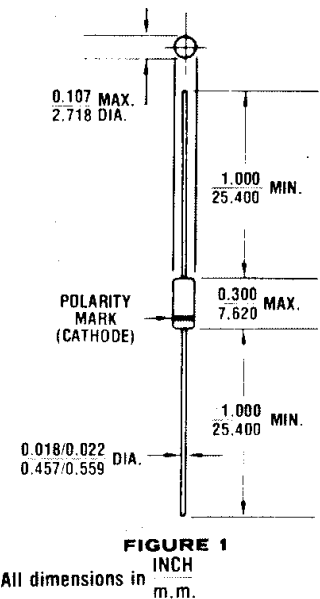
NOTE 1 Standard tolerance on JEDEC types shown is ± 10%. Suffix letter A denotes ± 5% tolerance; suffix letter C denotes ± 2%; and suffix letter D denotes ± 1% tolerance.

NOTE 2 Voltage measurements to be performed 20 sec. after application of D.C. test current.

NOTE 3 Zener impedance derived by superimposing on I_{ZT} , a 60 cps, rms ac current equal to 10% I_{ZT} (2 mA ac).

NOTE 4 Allowance has been made for the increase in V_Z due to Z_Z and for the increase in junction temperature as the unit approaches thermal equilibrium at the power dissipation of 400 mW.

**SILICON
400 mW
ZENER DIODES**



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.

1N746 thru 1N759A, 1N4370 thru 1N4372A DO-7

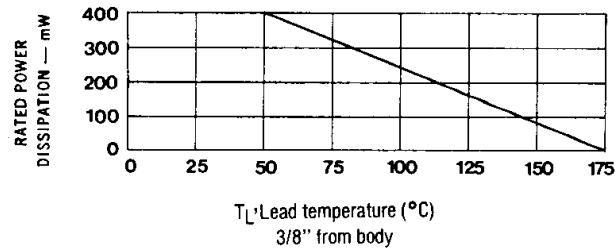


FIGURE 2 POWER DERATING CURVE

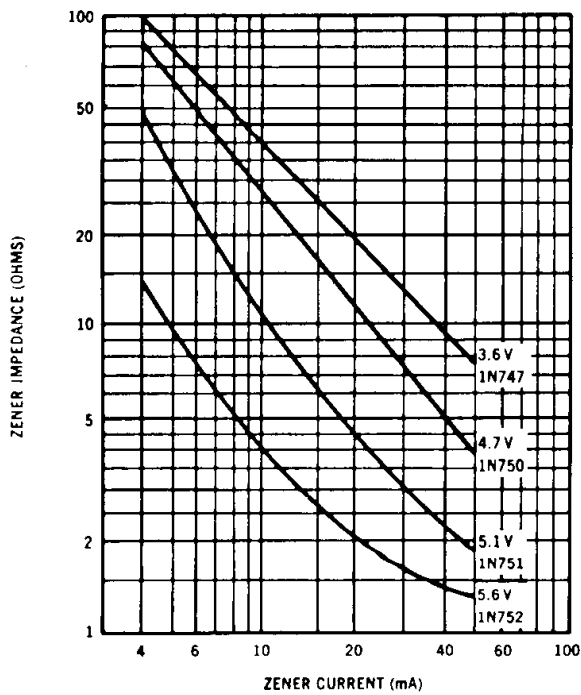


FIGURE 3

ZENER IMPEDANCE VS ZENER CURRENT
(TYPICAL)

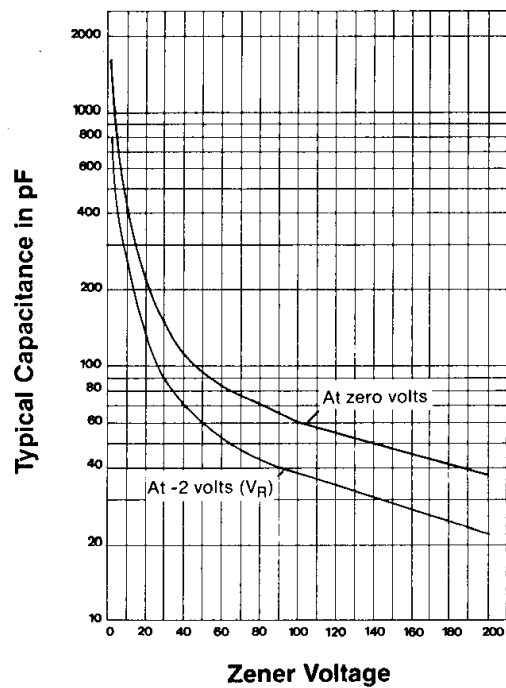


FIGURE 4

CAPACITANCE VS. ZENER VOLTAGE
(TYPICAL)