



1N746 THRU 1N759 AND 1N4370 THRU 1N4372

500mW SILICON ZENER DIODES



FEATURES

- * Zener voltage 2.4V to 12.0V
- * Metallurgically bonded device types

MECHANICAL CHARACTERISTICS

- * CASE: Hermetically sealed glass case. DO-35.
- * FINISH: All external surfaces are corrosion resistant and leads solderable.
- * THERMAL RESISTANCE: 200°C/W (Typical) junction to lead at 0.375 inches from body. Metallurgically bonded DO-35, exhibit less than 100°C/W at zero distance from body.
- * POLARITY: banded end is cathode.
- * WEIGHT: 0.2 grams
- * MOUNTING POSITIONS: Any

MAXIMUM RATINGS

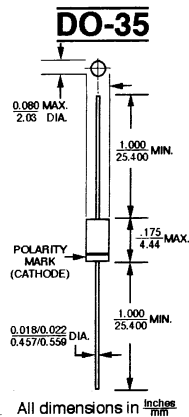
Junction and Storage temperatures: -65°C to +175°C

DC Power Dissipation: 500mW

Power Derating: 4.0mW/°C above 50°C

Forward Voltage @ 200mA: 1.5 Volts

VOLTAGE RANGE
2.4 to 12.0 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		
1N4370 1N4371 1N4372	2.4 2.7 3.0	20 20 20	30 30 29	100 75 50	200 150 100	150 135 120	-0.065 -0.060 -0.075

1N746 1N747 1N748	3.3 3.6 3.9	20 20 20	28 24 23	10 10 10	30 30 30	110 100 95	-0.066 -0.068 -0.046
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	-0.033 -0.015 ±0.010 +0.030
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	+0.049 +0.063 +0.067 +0.060
1N757 1N758 1N759	9.1 10.0 12.0	20 20 20	10 17 30	1 1 1	20 20 20	40 35 30	+0.061 +0.062 +0.062

NOTE 1

Standard tolerance on JEDEC types shown is $\pm 10\%$. Suffix letter A denotes $\pm 5\%$ tolerance; suffix letter C denotes $\pm 2\%$; and suffix letter D denotes $\pm 1\%$ 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} (2mA 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.

* JEDEC Registered Data

RATINGS AND CHARACTERISTIC CURVES (1N746 THRU 1N759A AND 1N4370 THRU 1N4372A)

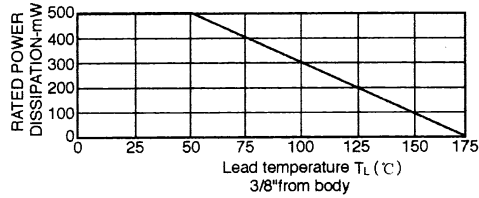


FIGURE 1
POWER DERATING CURVE

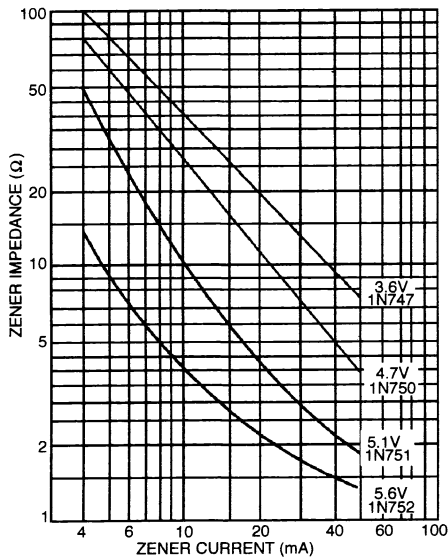


FIGURE 2
ZENER IMPEDANCE VS ZENER CURRENT
(TYPICAL)

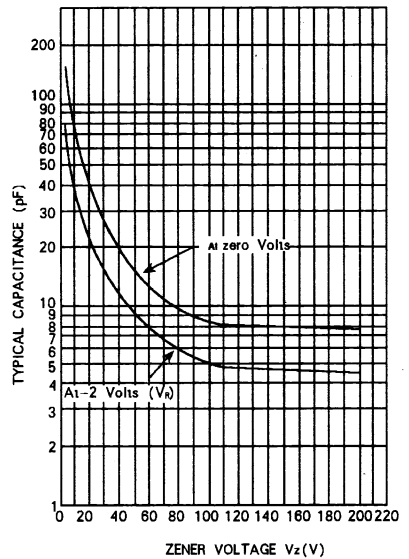


FIGURE 3
CAPACITANCE VS. ZENER VOLTAGE
(TYPICAL)