



# 1N746 THRU 1N759 AND 1N4370 THRU 1N4372

500mW SILICON ZENER DIODES



## FEATURES

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

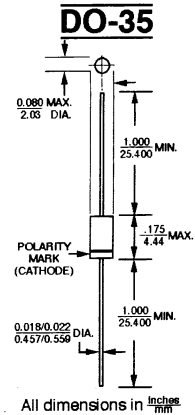
## MECHANICAL CHARACTERISTICS

- \* 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 $\alpha_{VZ}$
				@ 25°C	@ +150°C		
	VOLTS	mA	OHMS	$\mu A$	$\mu A$	mA	%/°C
1N4370	2.4	20	30	100	200	150	-0.065
1N4371	2.7	20	30	75	150	135	-0.060
1N4372	3.0	20	29	50	100	120	-0.075

1N746	3.3	20	28	10	30	110	-0.066
1N747	3.6	20	24	10	30	100	-0.068
1N748	3.9	20	23	10	30	95	-0.046
1N749	4.3	20	22	2	30	85	-0.033
1N750	4.7	20	19	2	30	75	-0.015
1N751	5.1	20	17	1	20	70	$\pm 0.010$
1N752	5.6	20	11	1	20	65	+0.030
1N753	6.2	20	7	1	20	60	+0.049
1N754	6.8	20	5	1	20	55	+0.063
1N755	7.5	20	6	1	20	50	+0.067
1N756	8.2	20	8	1	20	45	+0.060
1N757	9.1	20	10	1	20	40	+0.061
1N758	10.0	20	17	1	20	35	+0.062
1N759	12.0	20	30	1	20	30	+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

Alliance 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)

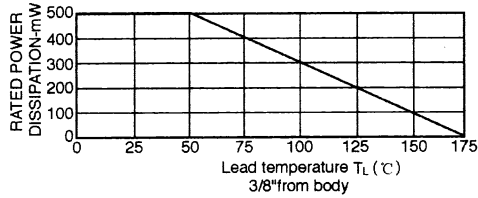


FIGURE 1  
POWER DERATING CURVE

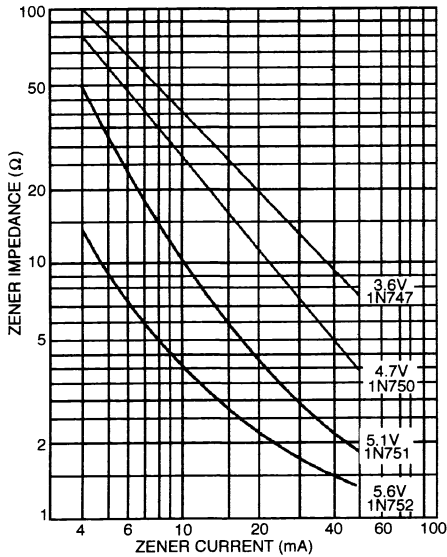


FIGURE 2  
ZENER IMPEDANCE VS ZENER CURRENT  
(TYPICAL)

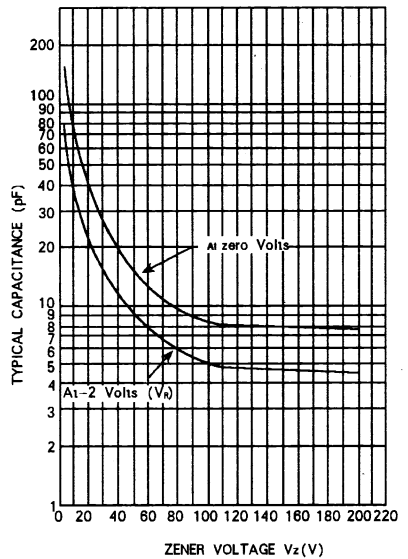


FIGURE 3  
CAPACITANCE VS. ZENER VOLTAGE  
(TYPICAL)