



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

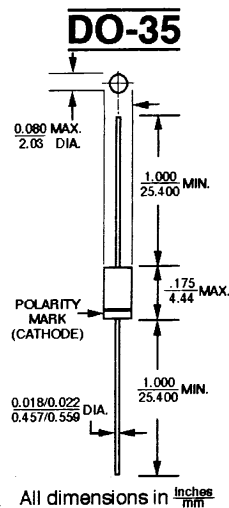
Junction and Storage temperatures: -65°C to +175°C

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 αV_Z
				@ 25°C	@ +150°C		
	VOLTS	mA	OHMS	μA	μA	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	-0.058
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	± 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	+0.053
1N755	7.5	20	6	1	20	50	+0.057
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

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)

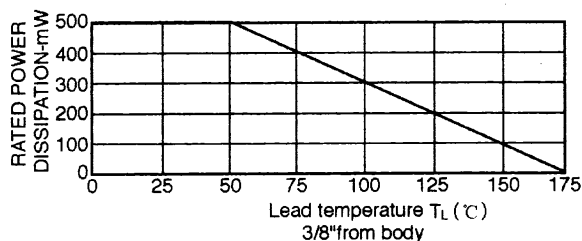


FIGURE 1
POWER DERATING CURVE

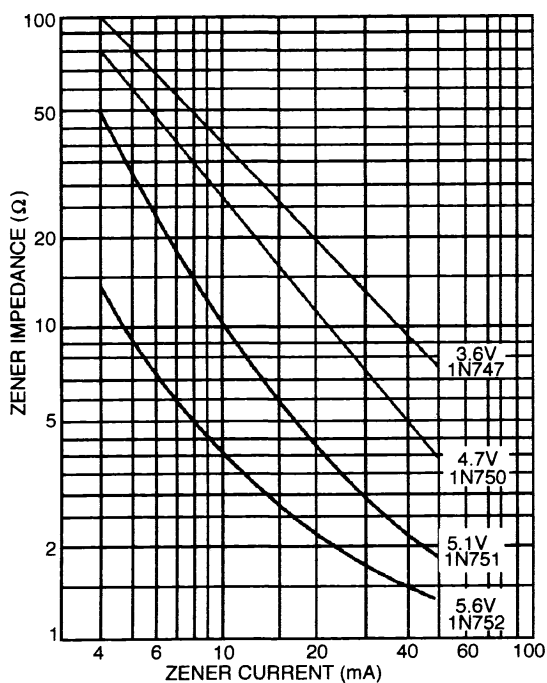


FIGURE 2
ZENER IMPEDANCE VS ZENER CURRENT
(TYPICAL)

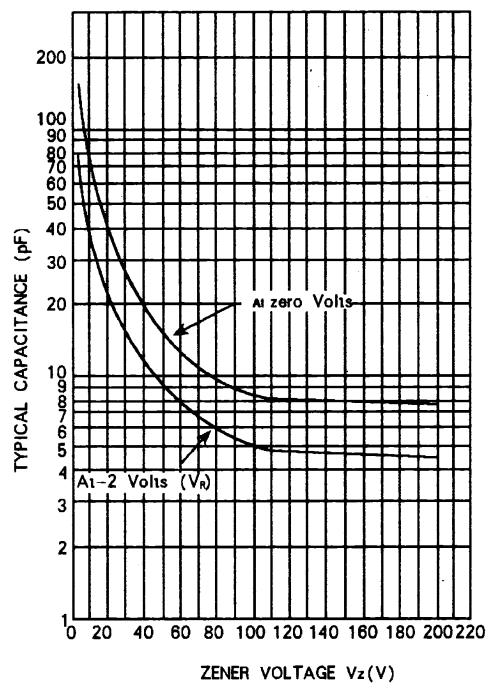


FIGURE 3
CAPACITANCE VS. ZENER VOLTAGE
(TYPICAL)