



**Microsemi Corp.**

The diode experts

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**1N759A, -1  
and  
1N4370 thru  
1N4372A, -1  
DO-35**

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

## FEATURES

- ZENER VOLTAGE 2.4V to 12.0V
- AVAILABLE IN JAN, JANTX and JANTXV-1 QUALIFICATIONS TO MIL-S-19500/127.  
DIE ALSO AVAILABLE AS JANHC FOR HYBRIDS.
- METALLURGICALLY BONDED DEVICE TYPES

## MAXIMUM RATINGS

Junction and Storage Temperatures:  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$

DC Power Dissipation: 500 mW

Power Derating: 4.0 mW/ $^{\circ}\text{C}$  above  $50^{\circ}\text{C}$

Forward Voltage @ 200 mA: 1.5 Volts

## \* ELECTRICAL CHARACTERISTICS @ $25^{\circ}\text{C}$

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 ( $\alpha_{VZ}$ )
				@ $25^{\circ}\text{C}$	@ $+150^{\circ}\text{C}$		
	VOLTS	mA	OHMS	$\mu\text{A}$	$\mu\text{A}$	mA	%/ $^{\circ}\text{C}$
1N4370	2.4	20	30	100	200	150	-085
1N4371	2.7	20	30	75	150	135	-080
1N4372	3.0	20	29	50	100	120	-075
1N746	3.3	20	28	10	30	110	-066
1N747	3.6	20	24	10	30	100	-058
1N748	3.9	20	23	10	30	95	-046
1N749	4.3	20	22	2	30	85	-033
1N750	4.7	20	19	2	30	75	-015
1N751	5.1	20	17	1	20	70	$\pm 010$
1N752	5.6	20	11	1	20	65	+030
1N753	6.2	20	7	.1	20	60	+049
1N754	6.8	20	5	.1	20	55	+053
1N755	7.5	20	6	.1	20	50	+057
1N756	8.2	20	8	.1	20	45	+060
1N757	9.1	20	10	.1	20	40	+061
1N758	10.0	20	17	.1	20	35	+062
1N759	12.0	20	30	.1	20	30	+062

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**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  $10\% I_{ZT}$  (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  
500 mW  
ZENER DIODES**

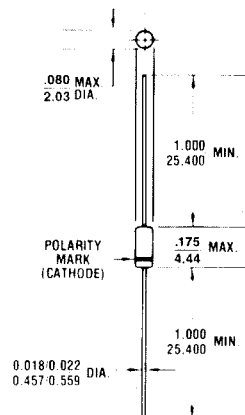


FIGURE 1

All dimensions in  
INCH  
m.m.

## MECHANICAL CHARACTERISTICS

**CASE:** Hermetically sealed glass case. DO-35.

**FINISH:** All external surfaces are corrosion resistant and leads solderable.

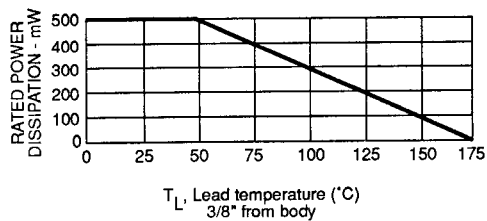
**THERMAL RESISTANCE:**  $200^{\circ}\text{C}/\text{W}$  (Typical) junction to lead at 0.375-inches from body. Metallurgically bonded DO-35's exhibit less than  $100^{\circ}\text{C}/\text{W}$  at zero distance from body.

**POLARITY:** Diode to be operated with the banded end positive with respect to the opposite end.

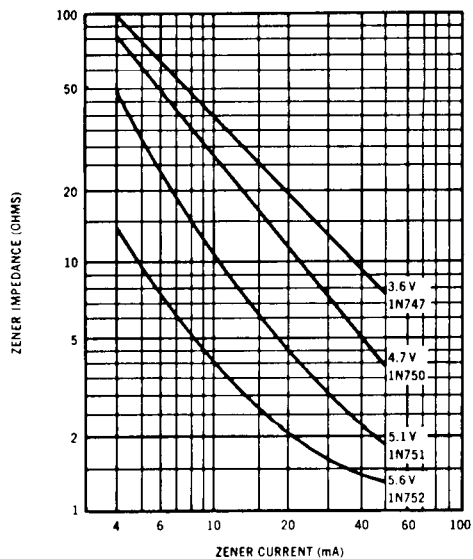
**WEIGHT:** 0.2 grams.

**MOUNTING POSITIONS:** Any.

# **1N746 thru 1N759A, -1 DO-35** **1N4370 thru 1N4372A, -1**

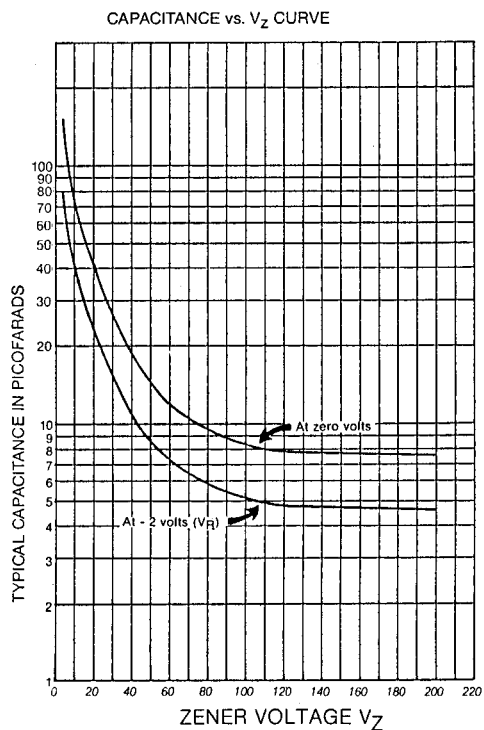


**FIGURE 2 POWER DERATING CURVE**



**FIGURE 3**

ZENER IMPEDANCE VS ZENER CURRENT  
(TYPICAL)



**FIGURE 4**

CAPACITANCE VS. ZENER VOLTAGE  
(TYPICAL)