

- 8.5 VOLT NOMINAL ZENER VOLTAGE  $\pm 5\%$
- TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
- LOW CURRENT RANGE: 0.5 AND 1.0 mA
- METALLURGICALLY BONDED
- DOUBLE PLUG CONSTRUCTION

1N4775  
thru  
1N4784A

## MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C  
Storage Temperature: -65°C to +175°C  
DC Power Dissipation: 500mW @ +50°C  
Power Derating: 4 mW / °C above +50°C

## REVERSE LEAKAGE CURRENT

$I_R = 10 \mu A @ 25^\circ C \ \& \ V_R = 6 \ Vdc$

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

JEDEC TYPE NUMBER	ZENER VOLTAGE	ZENER TEST CURRENT	MAXIMUM DYNAMIC IMPEDANCE	VOLTAGE TEMPERATURE STABILITY	TEMPERATURE RANGE	EFFECTIVE TEMPERATURE COEFFICIENT
	$V_Z @ I_{ZT}$ (Note 3)	$I_{ZT}$	$Z_{ZT}$ (Note 1)	$\Delta V_{ZT}$ (Note 2)	°C	% / °C
	VOLTS	mA	OHMS	mV	°C	% / °C
1N4775	8.5	0.5	200	64	0 to +75	0.01
1N4775A	8.5	0.5	200	132	-55 to +100	0.01
1N4776	8.5	0.5	200	32	0 to +75	0.005
1N4776A	8.5	0.5	200	66	-55 to +100	0.005
1N4777	8.5	0.5	200	13	0 to +75	0.002
1N4777A	8.5	0.5	200	26	-55 to +100	0.002
1N4778	8.5	0.5	200	6.4	0 to +75	0.001
1N4778A	8.5	0.5	200	13	-55 to +100	0.001
1N4779	8.5	0.5	200	3.2	0 to +75	0.0005
1N4779A	8.5	0.5	200	6.6	-55 to +100	0.0005
1N4780	8.5	1.0	100	64	0 to +75	0.01
1N4780A	8.5	1.0	100	132	-55 to +100	0.01
1N4781	8.5	1.0	100	32	0 to +75	0.005
1N4781A	8.5	1.0	100	66	-55 to +100	0.005
1N4782	8.5	1.0	100	13	0 to +75	0.002
1N4782A	8.5	1.0	100	26	-55 to +100	0.002
1N4783	8.5	1.0	100	6.4	0 to +75	0.001
1N4783A	8.5	1.0	100	13	-55 to +100	0.001
1N4784	8.5	1.0	100	3.2	0 to +75	0.0005
1N4784A	8.5	1.0	100	6.6	-55 to +100	0.0005

**NOTE 1** Zener impedance is derived by superimposing on  $I_{ZT}$  A 60Hz rms a.c. current equal to 10% of  $I_{ZT}$ .

**NOTE 2** The maximum allowable change observed over the entire temperature range i.e., the diode voltage will not exceed the specified mV at any discrete temperature between the established limits, per JEDEC standard No.5.

**NOTE 3** Zener voltage range equals 8.5 volts  $\pm 5\%$ .

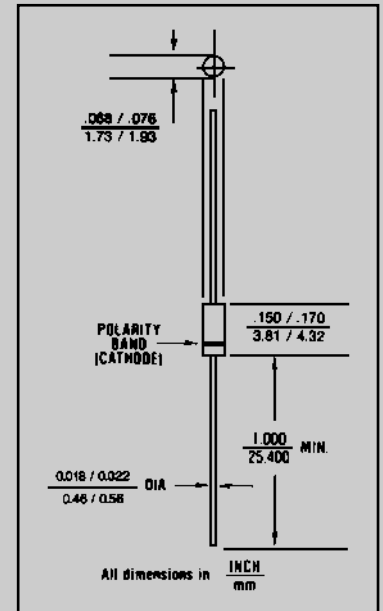


FIGURE 1

## DESIGN DATA

**CASE:** Hermetically sealed glass case. DO – 35 outline.

**LEAD MATERIAL:** Copper clad steel.

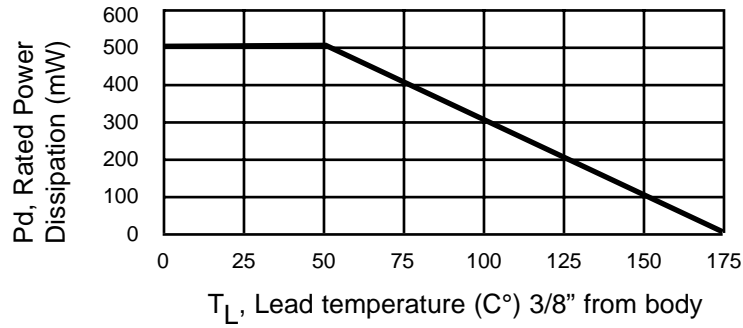
**LEAD FINISH:** Tin / Lead

**POLARITY:** Diode to be operated with the banded (cathode) end positive.

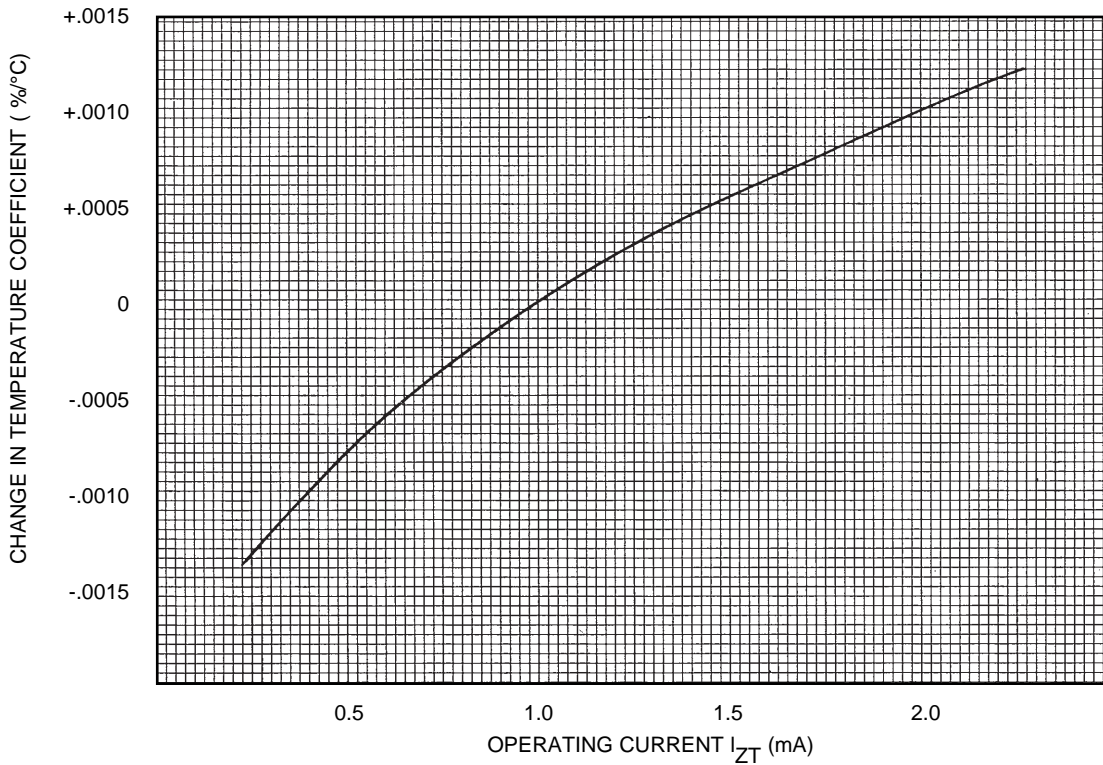
**MOUNTING POSITION:** ANY.



# 1N4775 thru 1N4784A



**FIGURE 2  
POWER DERATING CURVE**



**FIGURE 4  
TYPICAL CHANGE OF TEMPERATURE COEFFICIENT  
WITH CHANGE IN OPERATING CURRENT**