

- 9.1 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

1N4765
thru
1N4774A

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

$I_R = 10 \mu\text{A}$ @ 25°C & $V_R = 6 \text{ Vdc}$

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

| JEDEC TYPE NUMBER | ZENER VOLTAGE | ZENER TEST CURRENT | MAXIMUM DYNAMIC IMPEDANCE | MAXIMUM VOLTAGE TEMPERATURE STABILITY | TEMPERATURE RANGE | EFFECTIVE TEMPERATURE COEFFICIENT |
|-------------------|----------------------------|--------------------|---------------------------|---------------------------------------|-------------------|-----------------------------------|
| | $V_Z @ I_{ZT}$ (Note 3) | I_{ZT} | Z_{ZT} (Note 1) | ΔV_{ZT} (Note 2) | °C | % / °C |
| | VOLTS | mA | OHMS | mV | °C | % / °C |
| 1N4765 | 9.1 | 0.5 | 350 | 68 | 0 to +75 | 0.01 |
| 1N4765A | 9.1 | 0.5 | 350 | 141 | -55 to +100 | 0.01 |
| 1N4766 | 9.1 | 0.5 | 350 | 34 | 0 to +75 | 0.005 |
| 1N4766A | 9.1 | 0.5 | 350 | 70 | -55 to +100 | 0.005 |
| 1N4767 | 9.1 | 0.5 | 350 | 14 | 0 to +75 | 0.002 |
| 1N4767A | 9.1 | 0.5 | 350 | 28 | -55 to +100 | 0.002 |
| 1N4768 | 9.1 | 0.5 | 350 | 6.8 | 0 to +75 | 0.001 |
| 1N4768A | 9.1 | 0.5 | 350 | 14 | -55 to +100 | 0.001 |
| 1N4769 | 9.1 | 0.5 | 350 | 3.4 | 0 to +75 | 0.0005 |
| 1N4769A | 9.1 | 0.5 | 350 | 7 | -55 to +100 | 0.0005 |
| 1N4770 | 9.1 | 1.0 | 200 | 68 | 0 to +75 | 0.01 |
| 1N4770A | 9.1 | 1.0 | 200 | 141 | -55 to +100 | 0.01 |
| 1N4771 | 9.1 | 1.0 | 200 | 34 | 0 to +75 | 0.005 |
| 1N4771A | 9.1 | 1.0 | 200 | 70 | -55 to +100 | 0.005 |
| 1N4772 | 9.1 | 1.0 | 200 | 14 | 0 to +75 | 0.002 |
| 1N4772A | 9.1 | 1.0 | 200 | 28 | -55 to +100 | 0.002 |
| 1N4773 | 9.1 | 1.0 | 200 | 6.8 | 0 to +75 | 0.001 |
| 1N4773A | 9.1 | 1.0 | 200 | 14 | -55 to +100 | 0.001 |
| 1N4774 | 9.1 | 1.0 | 200 | 3.4 | 0 to +75 | 0.0005 |
| 1N4774A | 9.1 | 1.0 | 200 | 7 | -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 9.1 volts \pm 5%.

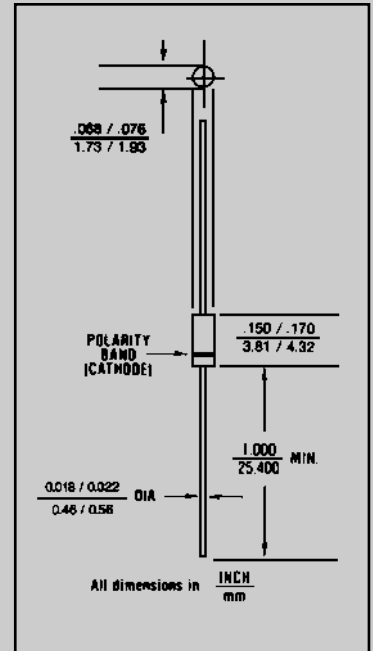


FIGURE 1

DESIGN DATA

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

LEAD MATERIAL: Copper clad steel.

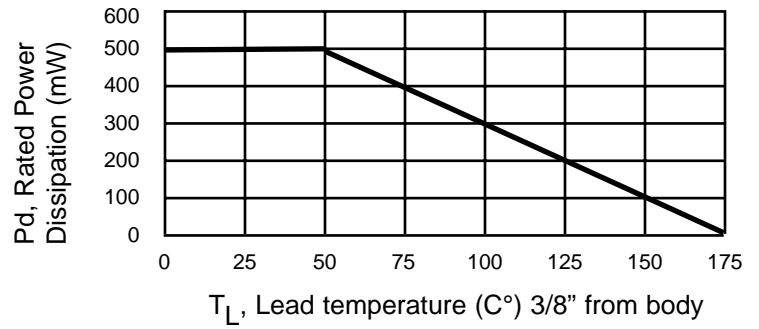
LEAD FINISH: Tin / Lead

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

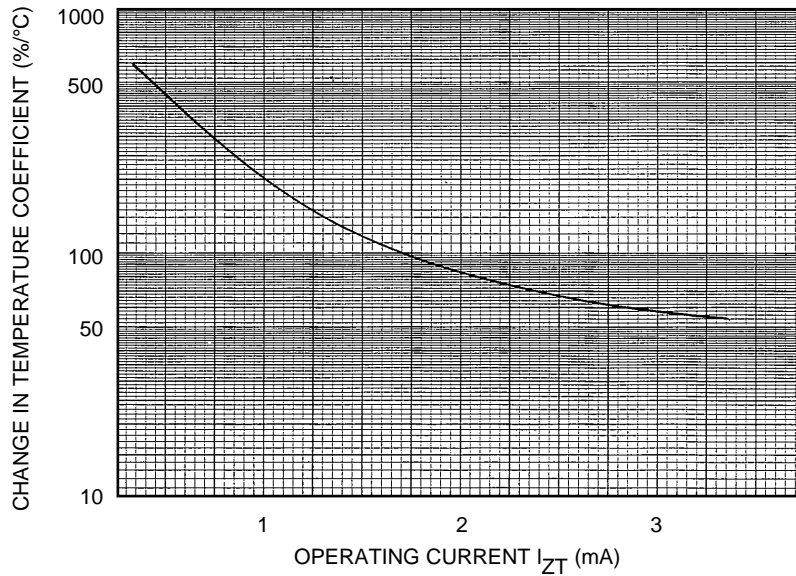
MOUNTING POSITION: ANY.



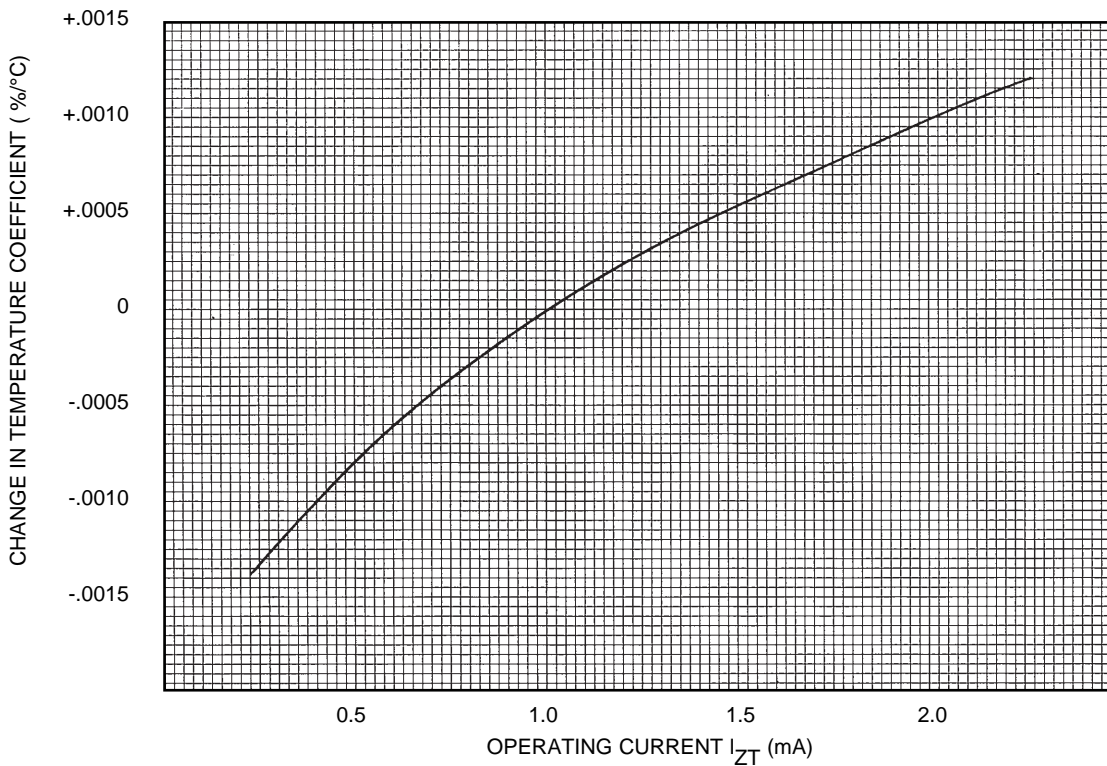
1N4765 thru 1N4774A



**FIGURE 2
POWER DERATING CURVE**



**FIGURE 3
ZENER IMPEDANCE VS. OPERATING CURRENT**



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