

- MONOLITHIC TEMPERATURE COMPENSATED ZENER REFERENCE CHIPS
- ALL JUNCTIONS COMPLETELY PROTECTED WITH SILICON DIOXIDE
- 9.0 VOLT NOMINAL ZENER VOLTAGE  $\pm 5\%$
- ELECTRICALLY SIMILAR TO 1N935 THRU 1N937A
- COMPATIBLE WITH ALL WIRE BONDING AND DIE ATTACH TECHNIQUES, WITH THE EXCEPTION OF SOLDER REFLOW

CD935  
thru  
CD937A

### MAXIMUM RATINGS

Operating Temperature:  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$   
Storage Temperature:  $-65^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS @  $25^{\circ}\text{C}$ , unless otherwise specified.

TYPE NUMBER	ZENER VOLTAGE $V_{ZT} @ I_{ZT}$ (Note 3)	ZENER TEST CURRENT $I_{ZT}$	MAXIMUM ZENER IMPEDANCE $Z_{ZT}$ (Note 1)	MAXIMUM VOLTAGE TEMPERATURE STABILITY $V_{ZT}$ (Note 2)	TEMPERATURE RANGE	EFFECTIVE TEMPERATURE COEFFICIENT
	VOLTS	mA	OHMS	mV	$^{\circ}\text{C}$	% / $^{\circ}\text{C}$
CD935	9.0	7.5	30	67	0 to + 75	0.01
CD935A	9.0	7.5	30	139	-55 to + 100	0.01
CD936	9.0	7.5	30	34	0 to + 75	0.005
CD936A	9.0	7.5	30	70	-55 to + 100	0.005
CD937	9.0	7.5	30	13	0 to + 75	0.002
CD937A	9.0	7.5	30	28	-55 to + 100	0.002

**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 9.0 volts  $\pm 5\%$ .

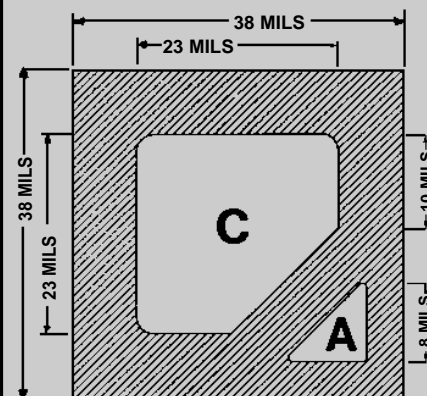


FIGURE 1

### DESIGN DATA

#### METALLIZATION:

Top: C (Cathode) .....Al  
A (Anode) .....Al  
Back: .....Au

AL THICKNESS .....25,000 Å Min

GOLD THICKNESS .....4,000 Å Min

CHIP THICKNESS .....10 Mils

#### CIRCUIT LAYOUT DATA:

Backside must be electrically isolated.

#### Backside is not cathode.

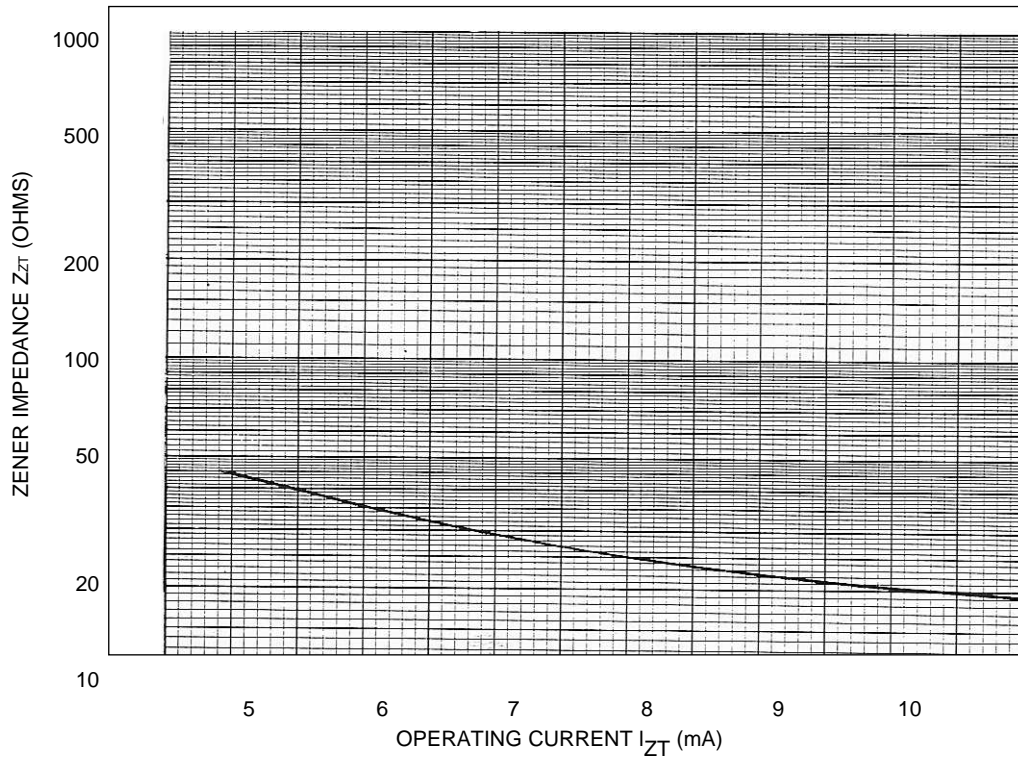
For Zener operation cathode must be operated positive with respect to anode.

#### TOLERANCES: ALL

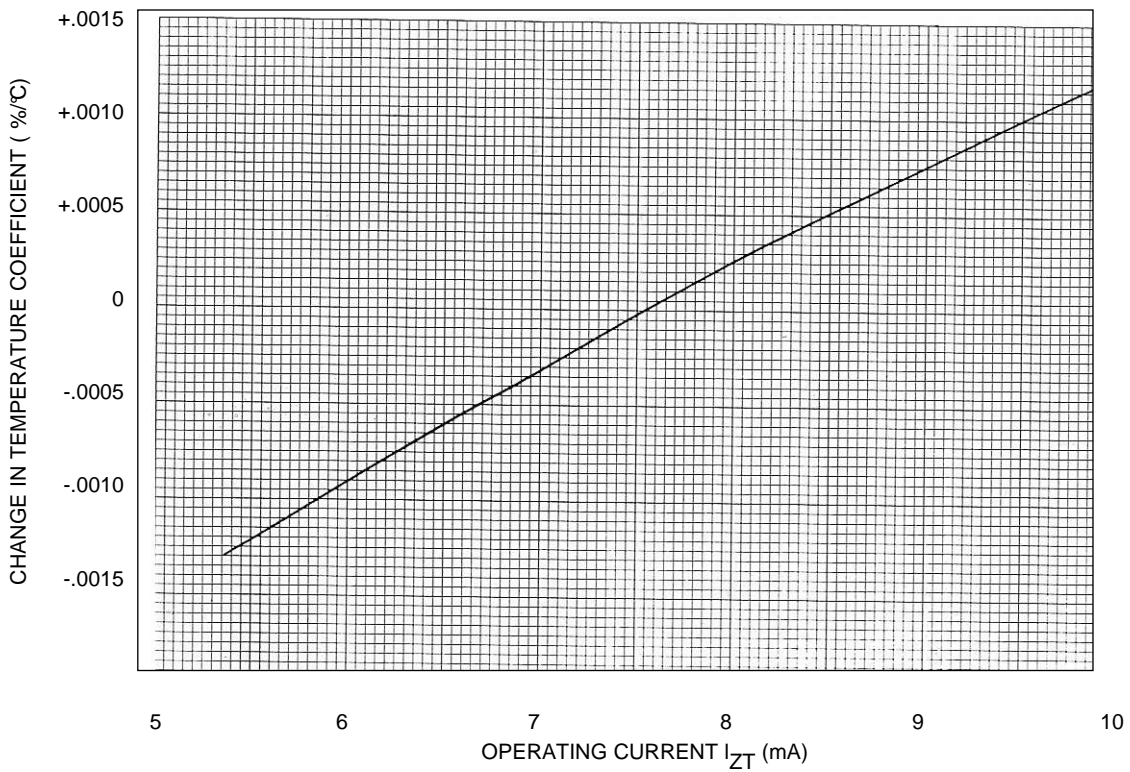
Dimensions  $\pm 2$  mils



# CD935 thru CD937A



**FIGURE 2**  
**ZENER IMPEDANCE**  
**VS.**  
**OPERATING CURRENT**



**FIGURE 3**  
**TYPICAL CHANGE OF TEMPERATURE COEFFICIENT**  
**WITH CHANGE IN OPERATING CURRENT**