

- 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°C to +175°C
Storage Temperature: -65°C to +175°C

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

| TYPE NUMBER | ZENER VOLTAGE | ZENER TEST CURRENT | MAXIMUM ZENER IMPEDANCE | MAXIMUM VOLTAGE TEMPERATURE STABILITY | TEMPERATURE RANGE | EFFECTIVE TEMPERATURE COEFFICIENT |
|-------------|-------------------------------|--------------------|-------------------------|---------------------------------------|-------------------|-----------------------------------|
| | $V_{ZT} @ I_{ZT}$ (Note 3) | I_{ZT} | Z_{ZT} (Note 1) | V_{ZT} (Note 2) | °C | % / °C |
| | VOLTS | mA | OHMS | mV | °C | % / °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 $\pm 5\%$.

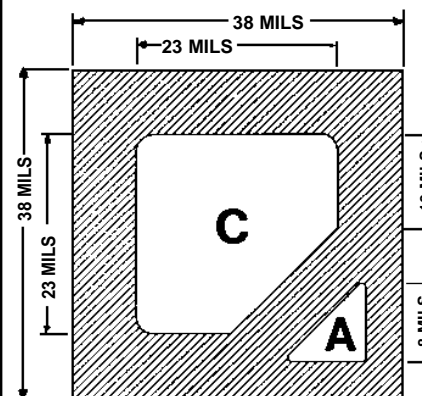


FIGURE 1

DESIGN DATA

METALLIZATION:

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

AL THICKNESS25,000 Å Min

GOLD THICKNESS ...4,000 Å Min

CHIP THICKNESS10 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 ± 2 mils



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CD935 thru CD937A

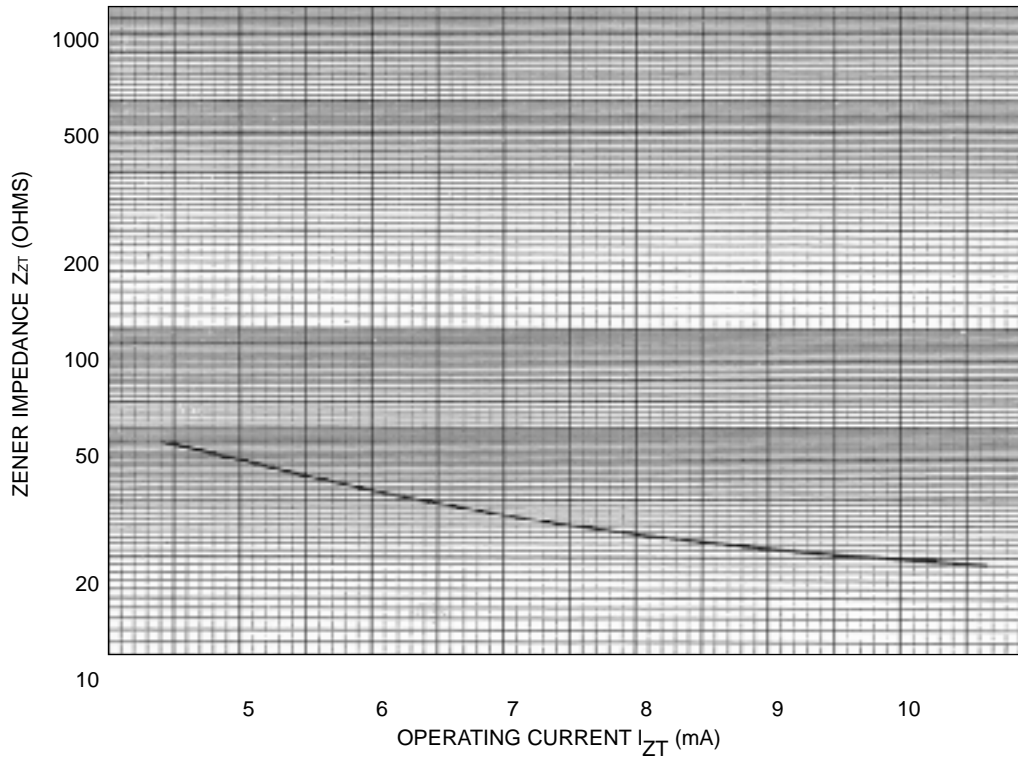


FIGURE 2
ZENER IMPEDANCE
VS.
OPERATING CURRENT

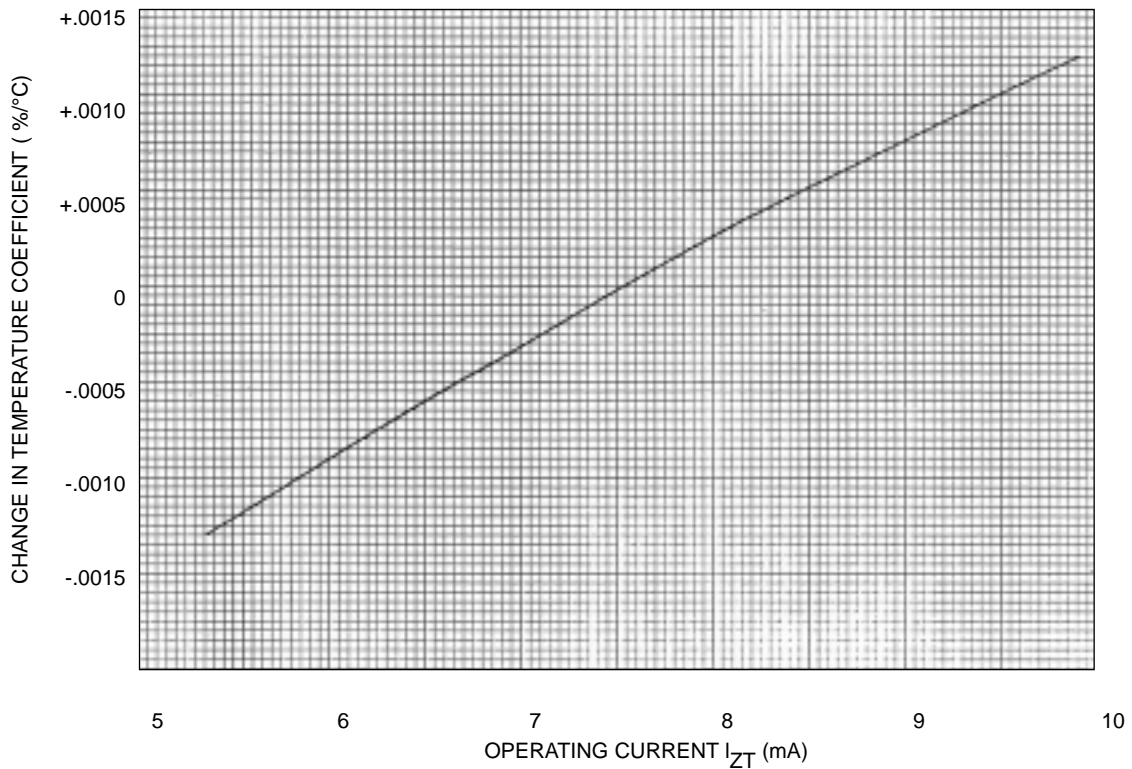


FIGURE 3
TYPICAL CHANGE OF TEMPERATURE COEFFICIENT
WITH CHANGE IN OPERATING CURRENT