- **CERTIFIED REFERENCE VOLTAGE STABILITY**
- **TIME VOLTAGE STABILITY TO 10 PPM/1000 HOURS**
- **6.35 VOLTS NOMINAL ± 5%**
- **METALLURGICALLY BONDED (-1)**
- **DOUBLE PLUG CONSTRUCTION**

1N4890 thru 1N4895A

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
Storage Temperature: -65°C to +175°C
DC Power Dissipation: 500 mW @ +50°C
Power Derating: 3.33 mW / °C above +50°C

This series of Ultra-Stable Reference Diodes offers a CERTIFIED REFERENCE VOLTAGE STABILITY measured over an operating period of 1000 hours. Standard stabilities are 10,20, and 50 PPM/1000 hours.

Ultra-Stable Certified Reference Diodes are to be used in circuits that require an extremely high degree of voltage time stability.

This series is subjected to a 1000 hour Stability Test Sequence, consisting of a 1000 hour power age with reference voltage measured once every 168 hours giving a total of 7 individual test points. The stability test is performed at 80°C ± 0.1°C.

A certificate containing the following data is supplied with each diode.

1. The stability test voltage readings.
2. The voltage drift as referenced to "Zero Hour" in μV.

ELECTRICAL CHARACTERISTICS @ 25°C

JEDEC TYPE NUMBER	NOMINAL ZENER VOLTAGE V_Z @ I_{ZT} ±5%	ZENER TEST CURRENT I_{ZT} ±0.01mA	MAXIMUM ZENER IMPEDANCE Z_{ZT} @ I_{ZT} (NOTE 1)	VOLTAGE TEMP. STABILITY ΔV_{ZT} (NOTE 2)	TEMP. RANGE	EFFECTIVE TEMP. COEFFICIENT	VOLTAGE TIME STABILITY @80°C INITIAL-TO-PEAK ΔV_{ZT} MAXIMUM (NOTE 3)	EFFECTIVE VOLTAGE TIME STABILITY INITIAL-TO-PEAK
	VOLTS	mA	OHMS	mV	°C	%/° C	μ V/1000 HRS.	PPM /1000HRS.
1N4890	6.35	7.5	10	5.0	25 to 100	0.001	318	50
1N4890A	6.35	7.5	10	10.0	-55 to 100	0.001	318	50
1N4891	6.35	7.5	10	2.5	25 to 100	0.0005	318	50
1N4891A	6.35	7.5	10	5.0	-55 to 100	0.0005	318	50
1N4892	6.35	7.5	10	5.0	25 to 100	0.001	127	20
1N4892A	6.35	7.5	10	10.0	-55 to 100	0.001	127	20
1N4893	6.35	7.5	10	2.5	25 to 100	0.0005	127	20
1N4893A	6.35	7.5	10	5.0	-55 to 100	0.0005	127	20
1N4894	6.35	7.5	10	5.0	25 to 100	0.001	64	10
1N4894A	6.35	7.5	10	10.0	-55 to 100	0.001	64	10
1N4895	6.35	7.5	10	2.5	25 to 100	0.0005	64	10
1N4895A	6.35	7.5	10	5.0	-55 to 100	0.0005	64	10

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 Under conditions of:
I_{ZT} = 7.5 mA + 0.0001 mA
TA = 80°C ± 0.1°C

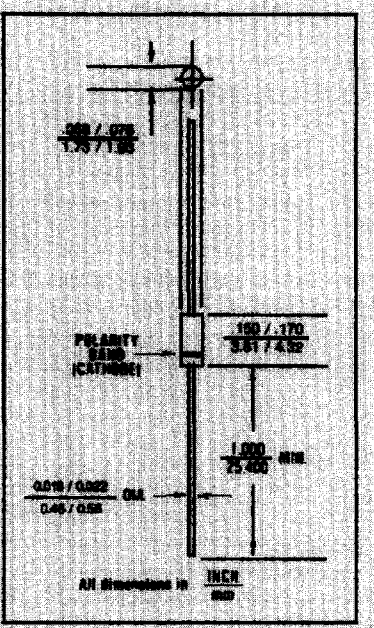


FIGURE 1

DESIGN DATA

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

LEAD MATERIAL: Copper clad steel.

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: AT 3/8" Lead Spacing = 250 °C/W maximum

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

MOUNTING POSITION: Any.

COMPENSATED DEVICES INCORPORATED
166 TREMONT STREET, MELROSE, MASSACHUSETTS 02176
PHONE (617) 665-1071 FAX (617) 665-7379
WWWSITE: http://www.cdi-diodes.com E-mail: mail@cdi-diodes.com

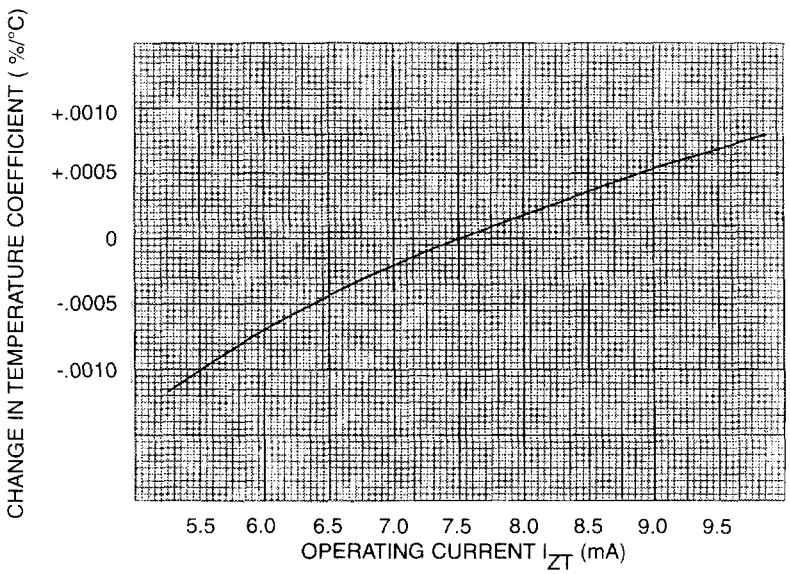


FIGURE 3

TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT

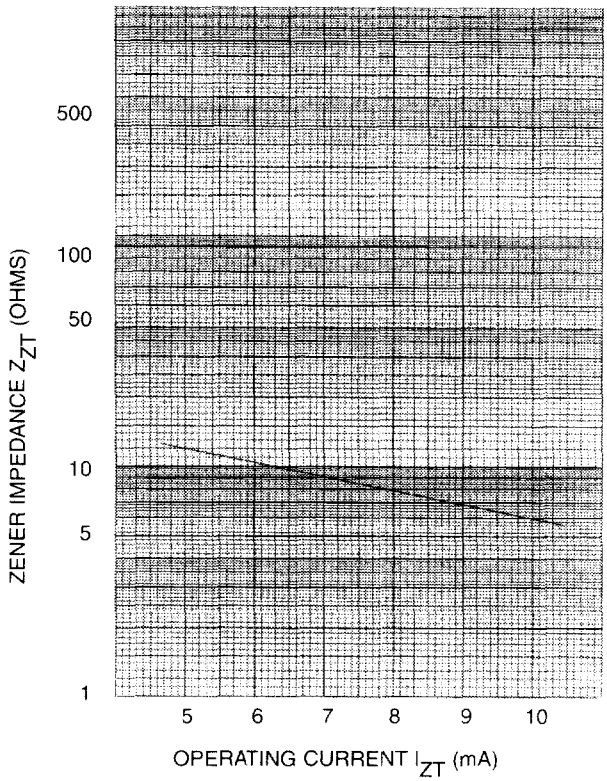
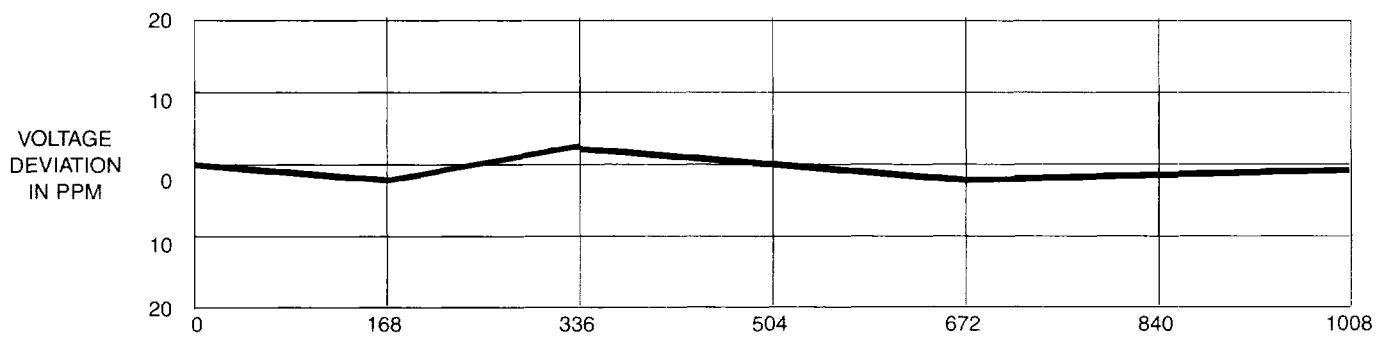


FIGURE 4

ZENER IMPEDANCE VS. OPERATING CURRENT



Typical ΔV_{ZT} plot of a 1N4895

FIGURE 5