

- 12.8 VOLT NOMINAL ZENER VOLTAGE  $\pm$  5%
- TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
- LOW NOISE
- METALLURGICALLY BONDED
- DOUBLE PLUG CONSTRUCTION

1N4896  
thru  
1N4915A

**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**

$I_R = 15 \mu A @ 25^\circ C \& V_R = 8V_{dc}$

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

| JEDEC TYPE NUMBER | TEST CURRENT $I_{ZT}$ (Note 3) | VOLTAGE STABILITY $\Delta V_{ZT}$ (Note 2) | TEMPERATURE RANGE | EFFECTIVE TEMPERATURE COEFFICIENT | MAXIMUM DYNAMIC IMPEDANCE $Z_{ZT}$ (Note 1) | MAXIMUM NOISE DENSITY $N_D$ |
|-------------------|--------------------------------|--|-------------------|-----------------------------------|---|-----------------------------|
|                   |                                |  |                   |                                   |   |                             |
| 1N4896            | 0.5                            | 96   | +25 to +100       | 0.01                              | 400   | 0.8                         |
| 1N4896A           | 0.5                            | 198  | -55 to +100       | 0.01                              | 400   | 0.8                         |
| 1N4897            | 0.5                            | 48   | +25 to +100       | 0.005                             | 400   | 0.8                         |
| 1N4897A           | 0.5                            | 99   | -55 to +100       | 0.005                             | 400   | 0.8                         |
| 1N4898            | 0.5                            | 19   | +25 to +100       | 0.002                             | 400   | 0.8                         |
| 1N4898A           | 0.5                            | 40   | -55 to +100       | 0.002                             | 400   | 0.8                         |
| 1N4899            | 0.5                            | 10   | +25 to +100       | 0.001                             | 400   | 0.8                         |
| 1N4899A           | 0.5                            | 20   | -55 to +100       | 0.001                             | 400   | 0.8                         |
| 1N4900            | 1.0                            | 96   | +25 to +100       | 0.01                              | 200   | 0.4                         |
| 1N4900A           | 1.0                            | 198  | -55 to +100       | 0.01                              | 200   | 0.4                         |
| 1N4901            | 1.0                            | 48   | +25 to +100       | 0.005                             | 200   | 0.4                         |
| 1N4901A           | 1.0                            | 99   | -55 to +100       | 0.005                             | 200   | 0.4                         |
| 1N4902            | 1.0                            | 19   | +25 to +100       | 0.002                             | 200   | 0.4                         |
| 1N4902A           | 1.0                            | 40   | -55 to +100       | 0.002                             | 200   | 0.4                         |
| 1N4903            | 1.0                            | 10   | +25 to +100       | 0.001                             | 200   | 0.4                         |
| 1N4903A           | 1.0                            | 20   | -55 to +100       | 0.001                             | 200   | 0.4                         |
| 1N4904            | 2.0                            | 96   | +25 to +100       | 0.01                              | 100   | 0.25                        |
| 1N4904A           | 2.0                            | 198  | -55 to +100       | 0.01                              | 100   | 0.25                        |
| 1N4905            | 2.0                            | 48   | +25 to +100       | 0.005                             | 100   | 0.25                        |
| 1N4905A           | 2.0                            | 99   | -55 to +100       | 0.005                             | 100   | 0.25                        |
| 1N4906            | 2.0                            | 19   | +25 to +100       | 0.002                             | 100   | 0.25                        |
| 1N4906A           | 2.0                            | 40   | -55 to +100       | 0.002                             | 100   | 0.25                        |
| 1N4907            | 2.0                            | 10   | +25 to +100       | 0.001                             | 100   | 0.25                        |
| 1N4907A           | 2.0                            | 20   | -55 to +100       | 0.001                             | 100   | 0.25                        |
| 1N4908            | 4.0                            | 96   | +25 to +100       | 0.01                              | 50  | 0.22                        |
| 1N4908A           | 4.0                            | 198  | -55 to +100       | 0.01                              | 50  | 0.22                        |
| 1N4909            | 4.0                            | 48   | +25 to +100       | 0.005                             | 50  | 0.22                        |
| 1N4909A           | 4.0                            | 99   | -55 to +100       | 0.005                             | 50  | 0.22                        |
| 1N4910            | 4.0                            | 19   | +25 to +100       | 0.002                             | 50  | 0.22                        |
| 1N4910A           | 4.0                            | 40   | -55 to +100       | 0.002                             | 50  | 0.22                        |
| 1N4911            | 4.0                            | 10   | +25 to +100       | 0.001                             | 50  | 0.22                        |
| 1N4911A           | 4.0                            | 20   | -55 to +100       | 0.001                             | 50  | 0.22                        |
| 1N4912            | 7.5                            | 96   | +25 to +100       | 0.01                              | 25  | 0.20                        |
| 1N4912A           | 7.5                            | 198  | -55 to +100       | 0.01                              | 25  | 0.20                        |
| 1N4913            | 7.5                            | 48   | +25 to +100       | 0.005                             | 25  | 0.20                        |
| 1N4913A           | 7.5                            | 99   | -55 to +100       | 0.005                             | 25  | 0.20                        |
| 1N4914            | 7.5                            | 19   | +25 to +100       | 0.002                             | 25  | 0.20                        |
| 1N4914A           | 7.5                            | 40   | -55 to +100       | 0.002                             | 25  | 0.20                        |
| 1N4915            | 7.5                            | 10   | +25 to +100       | 0.001                             | 25  | 0.20                        |
| 1N4915A           | 7.5                            | 20   | -55 to +100       | 0.001                             | 25  | 0.20                        |

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, per JEDEC standard No.5.

NOTE 3 Zener voltage range equals 12.8 volts  $\pm$  5%.

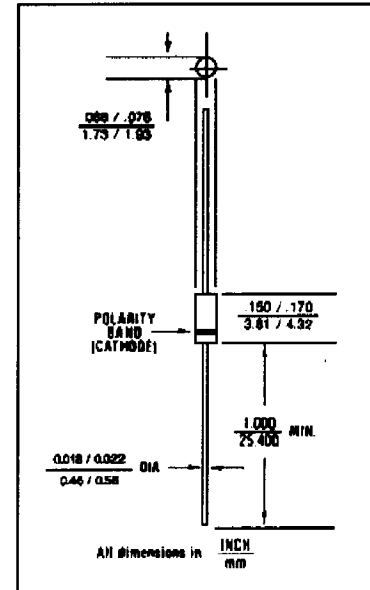


FIGURE 1

**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.



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