

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

### MAXIMUM RATINGS

|                                   |  |
|-----------------------------------|--|
| Operating and Storage Temperature | -65 to +175°C  |
| Thermal Resistance                | 250°C/W junction to lead at 3/8" lead length from body |
| Steady State Power                | 0.5 Watts at $T_L \leq 50^\circ\text{C}$               |
| Forward Voltage @ 200mA           | 1.1 Volts  |
| Solder Temperatures:              | 260°C for 10 s (max)                                   |

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Part Number<br>(Note 1) | Normal Zener Voltage<br>$V_Z @ I_{ZT}$<br>(Note 2) | Zener Test Current<br>$I_{ZT}$ | Maximum Zener Impedance<br>$Z_{ZT} @ I_{ZT}$<br>(Note 3) | Maximum Reverse Leakage Current<br>$V_R = 1 \text{ Volt}$ |                                   | Maximum Zener Current<br>$I_{ZM}$<br>(Note 4) | Typical Temperature Coefficient<br>Of Zener Voltage |
|-------------------------|--|--------------------------------|--|---|-----------------------------------|---|---|
|                         | VOLTS  | mA                             | OHMS   | $\mu\text{A} @ 25^\circ\text{C}$                          | $\mu\text{A} @ 125^\circ\text{C}$ | mA  | %/°C  |
| 1N4370                  | 2.4  | 20                             | 30   | 100   | 200                               | 150   | -.085   |
| 1N4371                  | 2.7  | 20                             | 30   | 75  | 150                               | 135   | -.080   |
| 1N4372                  | 3.0  | 20                             | 29   | 50  | 100                               | 120   | -.075   |
| 1N746                   | 3.3  | 20                             | 28   | 10  | 30                                | 110   | -.066   |
| 1N747                   | 3.6  | 20                             | 24   | 10  | 30                                | 100   | -.058   |
| 1N748                   | 3.9  | 20                             | 23   | 10  | 30                                | 95  | -.046   |
| 1N749                   | 4.3  | 20                             | 22   | 2   | 30                                | 85  | -.033   |
| 1N750                   | 4.7  | 20                             | 19   | 2   | 30                                | 75  | -.015   |
| 1N751                   | 5.1  | 20                             | 17   | 1   | 20                                | 70  | $\pm 0.10$  |
| 1N752                   | 5.6  | 20                             | 11   | 1   | 20                                | 65  | +0.030  |
| 1N753                   | 6.2  | 20                             | 7  | 0.1   | 20                                | 60  | +0.049  |
| 1N754                   | 6.8  | 20                             | 5  | 0.1   | 20                                | 55  | +0.053  |
| 1N755                   | 7.5  | 20                             | 6  | 0.1   | 20                                | 50  | +0.057  |
| 1N756                   | 8.2  | 20                             | 8  | 0.1   | 20                                | 45  | +0.060  |
| 1N757                   | 9.1  | 20                             | 10   | 0.1   | 20                                | 40  | +0.061  |
| 1N758                   | 10   | 20                             | 17   | 0.1   | 20                                | 35  | +0.062  |
| 1N759                   | 12   | 20                             | 30   | 0.1   | 20                                | 30  | +0.062  |

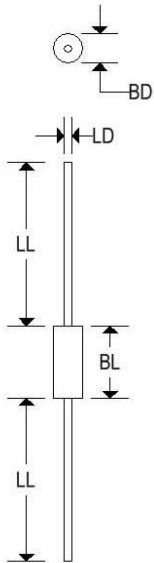
- Notes:
1. Suffix letter A denotes  $\pm 5\%$  tolerance, suffix C denotes  $\pm 2\%$  tolerance, & suffix D denotes  $\pm 1\%$  tolerance.
  2. Voltage measurements to be performed 20 seconds after application of dc current.
  3. Zener impedance derived by superimposing on  $I_{ZT}$ , a 60cps, rms ac current equal to 10%  $I_{ZT}$  (2mA ac)
  4. Allowance has been made for the increase in  $V_Z$  due to  $Z_Z$  and for the increase in junction temperature as the unit approaches thermal equilibrium at the power dissipation of 400mW.

# 1N746-1N759

## SILICON PLANAR ZENER DIODES

### MECHANICAL CHARACTERISTICS

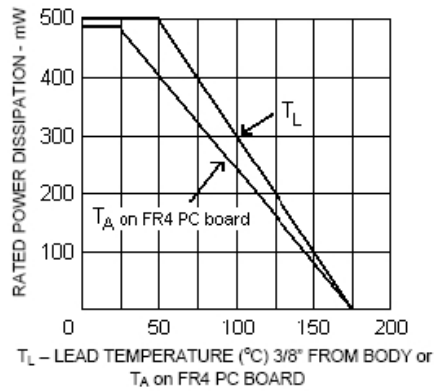
|                  |               |
|------------------|---------------|
| <b>Case:</b>     | DO-35 Glass   |
| <b>Marking:</b>  | Alpha Numeric |
| <b>Polarity:</b> | Cathode Band  |



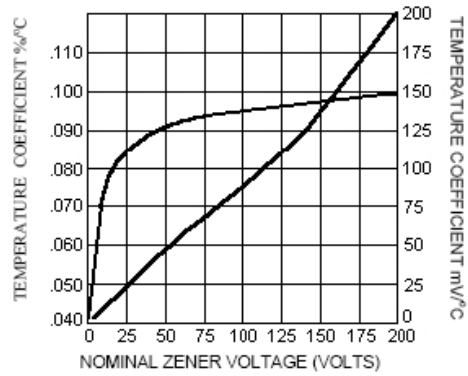
|    | DO-35  |       |             |        |
|----|--------|-------|-------------|--------|
|    | Inches |       | Millimeters |        |
|    | Min    | Max   | Min         | Max    |
| BD | 0.055  | 0.090 | 1.400       | 2.290  |
| BL | 0.120  | 0.200 | 3.050       | 5.080  |
| LD | 0.018  | 0.022 | 0.460       | 0.560  |
| LL | 1.000  | 1.500 | 25.400      | 38.100 |

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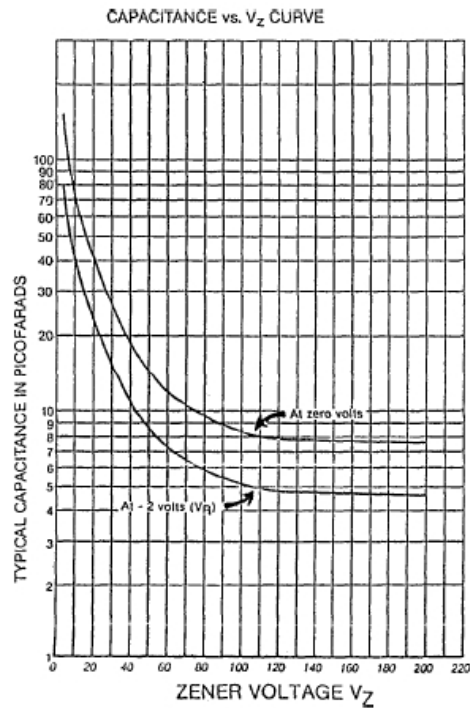
## SILICON PLANAR ZENER DIODES



**FIGURE 1**  
POWER DERATING CURVE



**FIGURE 2**  
ZENER VOLTAGE TEMPERATURE  
COEFFICIENT vs. ZENER VOLTAGE



**FIGURE 3**  
CAPACITANCE vs. ZENER VOLTAGE  
(TYPICAL)