

# 1N746A - 1N759A

$V_Z$  : 3.3 to 12V

$P_D$  : 500mW

### FEATURES :

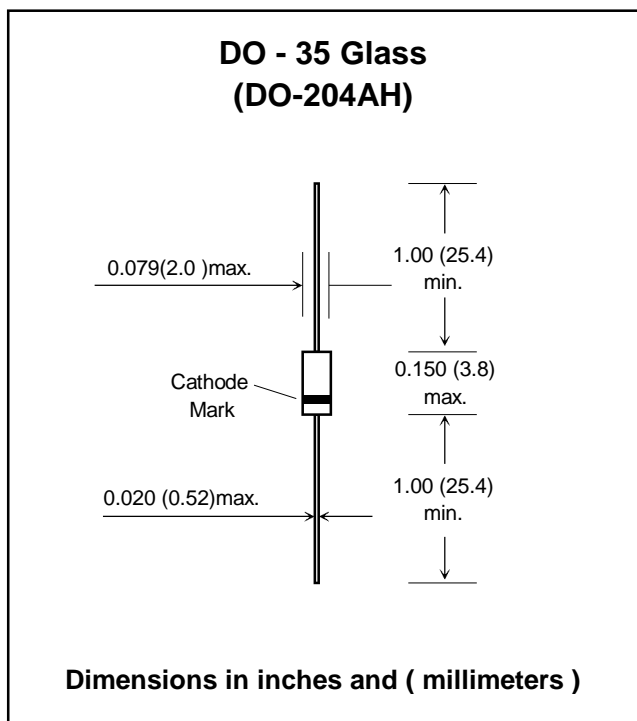
- Silicon planar power zener diodes.
- Standard zener voltage tolerance is  $\pm 5\%$
- Other tolerances are available upon request.
- **Pb / RoHS Free**

### MECHANICAL DATA :

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13g

## ZENER DIODES



### Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

| Parameter                                     | Symbol          | Value              | Unit               |
|---|-----------------|--------------------|--------------------|
| Zener Current see Table "Characteristics"     |                 |                    |                    |
| Maximum Forward Voltage at $I_F = 200$ mA.    | $V_F$           | 1.2                | V                  |
| Power Dissipation at $T_L = 75^\circ\text{C}$ | $P_D$           | 500 <sup>(1)</sup> | mW                 |
| Thermal Resistance Junction to Ambient Air    | $R_{\theta JA}$ | 300 <sup>(2)</sup> | $^\circ\text{C/W}$ |
| Junction temperature                          | $T_J$           | 175                | $^\circ\text{C}$   |
| Storage temperature range                     | $T_S$           | -65 to + 150       | $^\circ\text{C}$   |

Notes:

(1)  $T_L$  is measured 3/8" from body.

(2) Valid provided that leads at a distance of 3/8" from case are kept at ambient temperature.



## ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

| Type   | Nominal Zener Voltage<br>$V_z @ I_{ZT}$ | Test Current<br>$I_{ZT}$ | Maximum Zener Impedance<br>$Z_{ZT} @ I_{ZT}^{(1)}$ | Maximum Reverse Leakage Current<br>$I_R^{(2)} @ V_R=1V$ |             | Maximum DC. Zener Current<br>$I_{ZM}$ |
|--------|---|--------------------------|--|---|-------------|---------------------------------------|
|        |   |                          |  | Ta=25°C   | Ta=150°C    |                                       |
|        |   |                          |  | ( $\mu A$ )   | ( $\mu A$ ) |                                       |
| 1N746A | 3.3                                     | 20                       | 28   | 10  | 30          | 110                                   |
| 1N747A | 3.6                                     | 20                       | 24   | 10  | 30          | 100                                   |
| 1N748A | 3.9                                     | 20                       | 23   | 10  | 30          | 95                                    |
| 1N749A | 4.3                                     | 20                       | 22   | 2   | 30          | 85                                    |
| 1N750A | 4.7                                     | 20                       | 19   | 2   | 30          | 75                                    |
| 1N751A | 5.1                                     | 20                       | 17   | 1   | 20          | 70                                    |
| 1N752A | 5.6                                     | 20                       | 11   | 1   | 20          | 65                                    |
| 1N753A | 6.2                                     | 20                       | 7  | 0.1   | 20          | 60                                    |
| 1N754A | 6.8                                     | 20                       | 5  | 0.1   | 20          | 55                                    |
| 1N755A | 7.5                                     | 20                       | 6  | 0.1   | 20          | 50                                    |
| 1N756A | 8.2                                     | 20                       | 8  | 0.1   | 20          | 45                                    |
| 1N757A | 9.1                                     | 20                       | 10   | 0.1   | 20          | 40                                    |
| 1N758A | 10                                      | 20                       | 17   | 0.1   | 20          | 35                                    |
| 1N759A | 12                                      | 20                       | 30   | 0.1   | 20          | 30                                    |

Notes :

- (1) The Zener impedance is derived from the 1 kHz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current ( $I_{ZT}$ ) is superimposed on  $I_{ZT}$ . Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.
- (2) Valid provided that leads at a distance of 3/8" from case are kept at ambient temperature.
- (3) The type number listed have a standard tolerance on the nominal zener voltage of  $\pm 5.0\%$ .