

**$V_Z$ : 5.6 to 330 V**  
 **$P_D$ : 2 W**

### Features

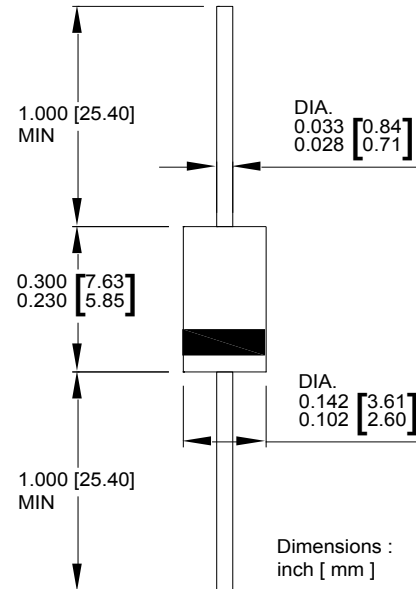
- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- For use in stabilizing and clipping circuits with high power rating
- RoHS compliant

### Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any

## Axial Lead Zener Diodes

DO-15



### Maximum Ratings( $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter                                              | Symbol    | Value         | Unit             |
|--------------------------------------------------------|-----------|---------------|------------------|
| DC power dissipation at $T_L = 75^\circ\text{C}^{(1)}$ | $P_D$     | 2             | W                |
| Maximum forward voltage at $I_F = 200\text{ mA}$       | $V_F$     | 1.5           | V                |
| Junction temperature range                             | $T_J$     | - 55 to + 150 | $^\circ\text{C}$ |
| Storage temperature range                              | $T_{STG}$ | - 55 to + 150 | $^\circ\text{C}$ |

**Note:**

(1)  $T_L$  = Lead temperature at 3/8 " (9.5mm) from body

**Ratings and Characteristics Curves ( $T_A=25^\circ\text{C}$  unless otherwise noted)**

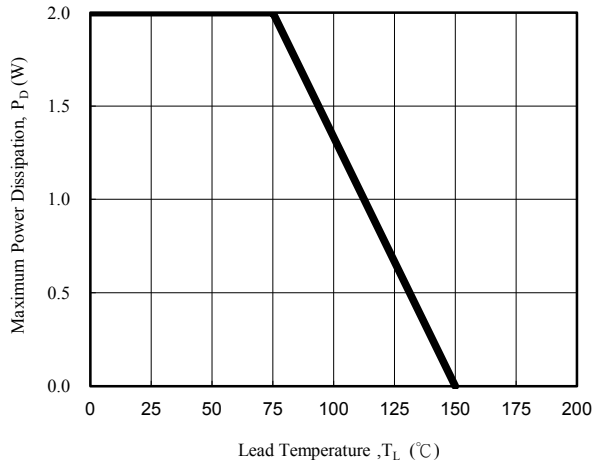


Fig. 1 - Power Temperature Derating Curve

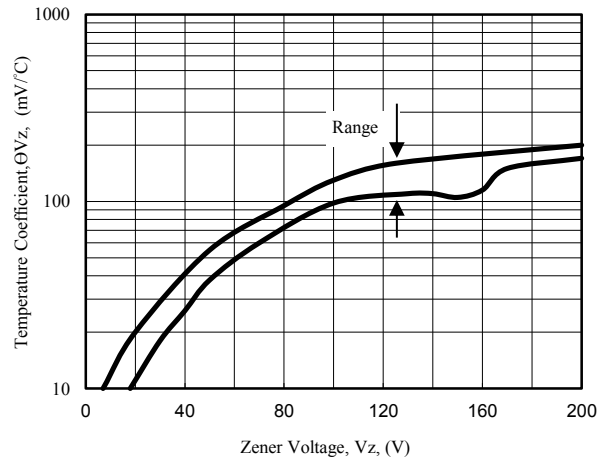


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

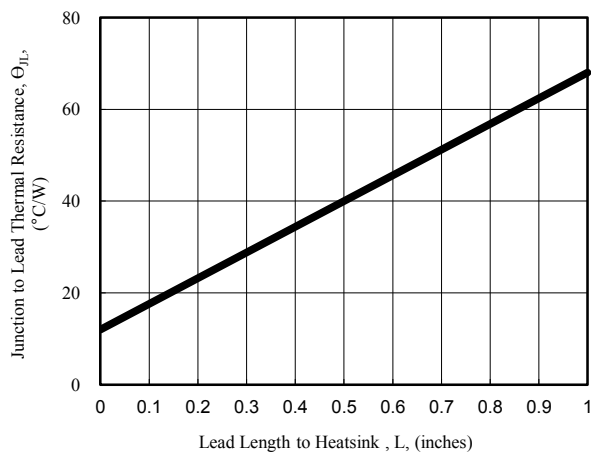


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

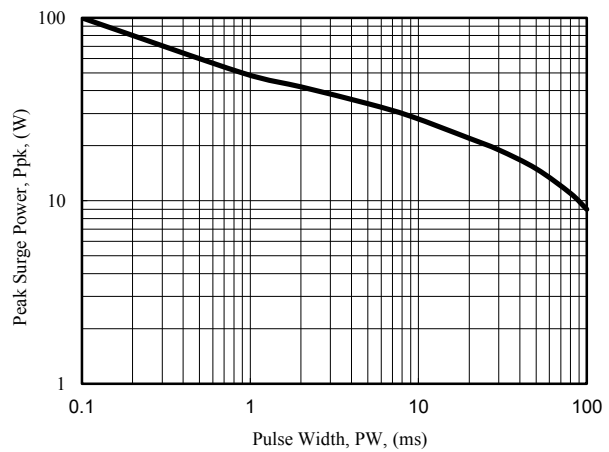


Fig. 4 - Maximum Surge Power

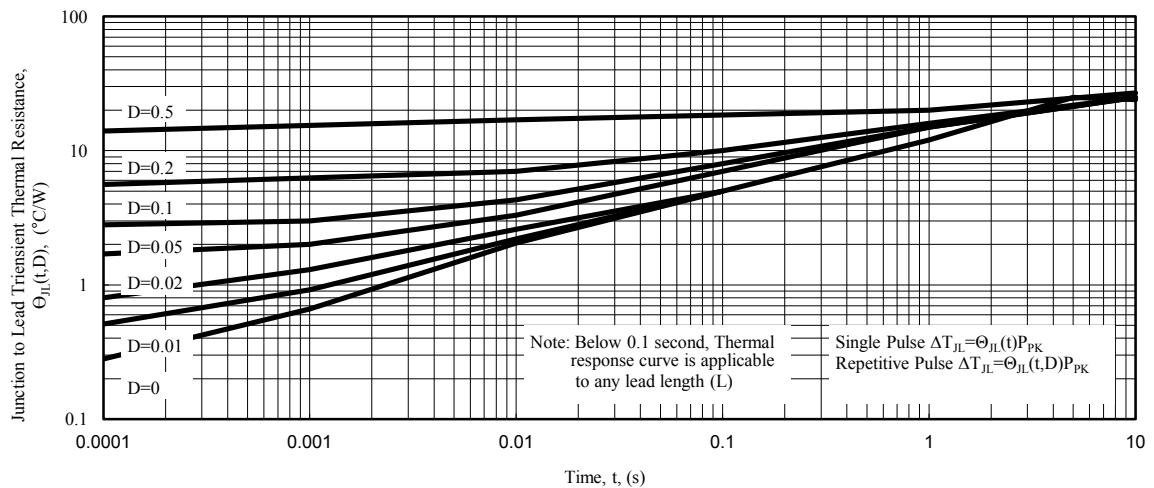


Fig. 5 - Typical Thermal Response  $L$ , Lead Length=3/8inch

**Electrical Characteristics(T<sub>A</sub>=25°C unless otherwise noted)**

| Part Number | Nominal Zener Voltage            |                 | Maximum Zener Impedance           |                                   |                 | Maximum Reverse Leakage Current |       | Maximum DC Zener Current |
|-------------|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|-------|--------------------------|
|             | V <sub>Z</sub> @ I <sub>ZT</sub> | I <sub>ZT</sub> | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>ZK</sub> @ I <sub>ZK</sub> | I <sub>ZK</sub> | I <sub>R</sub> @ V <sub>R</sub> |       | I <sub>ZM</sub>          |
|             | (V)                              | (mA)            | (Ω)                               | (Ω)                               | (mA)            | (μA)                            | (V)   | (mA)                     |
| 2EZ5.6D5    | 5.6                              | 89.5            | 2.5                               | 500                               | 1.00            | 5.0                             | 2.0   | 323.0                    |
| 2EZ6.2D5    | 6.2                              | 80.5            | 1.5                               | 700                               | 1.00            | 5.0                             | 3.0   | 292.0                    |
| 2EZ6.8D5    | 6.8                              | 73.5            | 2.0                               | 700                               | 1.00            | 5.0                             | 4.0   | 266.0                    |
| 2EZ7.5D5    | 7.5                              | 66.5            | 2.0                               | 700                               | 0.50            | 5.0                             | 5.0   | 242.0                    |
| 2EZ8.2D5    | 8.2                              | 61.0            | 2.3                               | 700                               | 0.50            | 5.0                             | 6.0   | 220.0                    |
| 2EZ9.1D5    | 9.1                              | 55.0            | 2.5                               | 700                               | 0.50            | 3.0                             | 7.0   | 200.0                    |
| 2EZ10D5     | 10.0                             | 50.0            | 3.5                               | 700                               | 0.25            | 3.0                             | 7.6   | 182.0                    |
| 2EZ11D5     | 11.0                             | 45.5            | 4.0                               | 700                               | 0.25            | 1.0                             | 8.4   | 166.0                    |
| 2EZ12D5     | 12.0                             | 41.5            | 4.5                               | 700                               | 0.25            | 1.0                             | 9.1   | 152.0                    |
| 2EZ13D5     | 13.0                             | 38.5            | 5.0                               | 700                               | 0.25            | 0.5                             | 9.9   | 138.0                    |
| 2EZ14D5     | 14.0                             | 35.7            | 5.5                               | 700                               | 0.25            | 0.5                             | 10.6  | 130.0                    |
| 2EZ15D5     | 15.0                             | 33.4            | 7.0                               | 700                               | 0.25            | 0.5                             | 11.4  | 122.0                    |
| 2EZ16D5     | 16.0                             | 31.2            | 8.0                               | 700                               | 0.25            | 0.5                             | 12.2  | 114.0                    |
| 2EZ17D5     | 17.0                             | 29.4            | 9.0                               | 750                               | 0.25            | 0.5                             | 13.0  | 107.0                    |
| 2EZ18D5     | 18.0                             | 27.8            | 10.0                              | 750                               | 0.25            | 0.5                             | 13.7  | 100.0                    |
| 2EZ19D5     | 19.0                             | 26.3            | 11.0                              | 750                               | 0.25            | 0.5                             | 14.4  | 95.0                     |
| 2EZ20D5     | 20.0                             | 25.0            | 11.0                              | 750                               | 0.25            | 0.5                             | 15.2  | 90.0                     |
| 2EZ22D5     | 22.0                             | 22.8            | 12.0                              | 750                               | 0.25            | 0.5                             | 16.7  | 82.0                     |
| 2EZ24D5     | 24.0                             | 20.8            | 13.0                              | 750                               | 0.25            | 0.5                             | 18.2  | 76.0                     |
| 2EZ27D5     | 27.0                             | 18.5            | 18.0                              | 750                               | 0.25            | 0.5                             | 20.6  | 68.0                     |
| 2EZ30D5     | 30.0                             | 16.6            | 20.0                              | 1000                              | 0.25            | 0.5                             | 22.5  | 60.0                     |
| 2EZ33D5     | 33.0                             | 15.1            | 23.0                              | 1000                              | 0.25            | 0.5                             | 25.1  | 55.0                     |
| 2EZ36D5     | 36.0                             | 13.9            | 25.0                              | 1000                              | 0.25            | 0.5                             | 27.4  | 50.0                     |
| 2EZ39D5     | 39.0                             | 12.8            | 30.0                              | 1000                              | 0.25            | 0.5                             | 29.7  | 47.0                     |
| 2EZ43D5     | 43.0                             | 11.6            | 35.0                              | 1500                              | 0.25            | 0.5                             | 32.7  | 43.0                     |
| 2EZ47D5     | 47.0                             | 10.6            | 40.0                              | 1500                              | 0.25            | 0.5                             | 35.8  | 39.0                     |
| 2EZ51D5     | 51.0                             | 9.8             | 48.0                              | 1500                              | 0.25            | 0.5                             | 38.8  | 36.0                     |
| 2EZ56D5     | 56.0                             | 9.0             | 55.0                              | 2000                              | 0.25            | 0.5                             | 42.6  | 32.0                     |
| 2EZ62D5     | 62.0                             | 8.1             | 60.0                              | 2000                              | 0.25            | 0.5                             | 47.1  | 29.0                     |
| 2EZ68D5     | 68.0                             | 7.4             | 75.0                              | 2000                              | 0.25            | 0.5                             | 51.7  | 27.0                     |
| 2EZ75D5     | 75.0                             | 6.7             | 90.0                              | 2000                              | 0.25            | 0.5                             | 56.0  | 24.0                     |
| 2EZ82D5     | 82.0                             | 6.1             | 100.0                             | 3000                              | 0.25            | 0.5                             | 62.2  | 22.0                     |
| 2EZ91D5     | 91.0                             | 5.5             | 125.0                             | 3000                              | 0.25            | 0.5                             | 69.2  | 20.0                     |
| 2EZ100D5    | 100.0                            | 5.0             | 175.0                             | 3000                              | 0.25            | 0.5                             | 76.0  | 18.0                     |
| 2EZ110D5    | 110.0                            | 4.5             | 250.0                             | 4000                              | 0.25            | 0.5                             | 83.6  | 17.0                     |
| 2EZ120D5    | 120.0                            | 4.2             | 325.0                             | 4500                              | 0.25            | 0.5                             | 91.2  | 15.0                     |
| 2EZ130D5    | 130.0                            | 3.8             | 400.0                             | 5000                              | 0.25            | 0.5                             | 98.8  | 14.0                     |
| 2EZ140D5    | 140.0                            | 3.6             | 500.0                             | 5500                              | 0.25            | 0.5                             | 106.4 | 13.0                     |
| 2EZ150D5    | 150.0                            | 3.3             | 575.0                             | 6000                              | 0.25            | 0.5                             | 114.0 | 12.0                     |
| 2EZ160D5    | 160.0                            | 3.1             | 650.0                             | 6500                              | 0.25            | 0.5                             | 121.6 | 11.0                     |
| 2EZ170D5    | 170.0                            | 2.9             | 675.0                             | 7000                              | 0.25            | 0.5                             | 130.4 | 11.0                     |
| 2EZ180D5    | 180.0                            | 2.8             | 725.0                             | 7000                              | 0.25            | 0.5                             | 136.8 | 10.0                     |
| 2EZ190D5    | 190.0                            | 2.6             | 825.0                             | 8000                              | 0.25            | 0.5                             | 144.8 | 10.0                     |
| 2EZ200D5    | 200.0                            | 2.5             | 1900.0                            | 9990                              | 0.25            | 0.5                             | 152.0 | 9.0                      |
| 2EZ220D5    | 220.0                            | 2.0             | 2000.0                            | 8500                              | 0.25            | 0.5                             | 167.0 | 8.0                      |
| 2EZ270D5    | 270.0                            | 1.6             | 2200.0                            | 8500                              | 0.25            | 0.5                             | 205.0 | 6.7                      |
| 2EZ300D5    | 300.0                            | 1.5             | 2200.0                            | 9000                              | 0.25            | 0.5                             | 228.0 | 5.9                      |
| 2EZ330D5    | 330.0                            | 1.4             | 2300.0                            | 9000                              | 0.25            | 0.5                             | 250.0 | 5.4                      |

**Notes :**

- (1) The type number listed have a standard tolerance on the nominal zener voltage of ± 5 %
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I<sub>ZT</sub> per JEDEC method