

75W Zener Diodes

Features

- Voltage Range 7.5 – 75 Volts
- Glass passivated junction
- 75 Watt steady state @ 65°C
- 5000 Watt peak pulse power
- Operating temperature -55°C to +175°C
- Good clamping ability
- Available in Normal and Reverse polarity
- Metric and UNF thread type

Mechanical Characteristics

- Hermetically sealed DO-5 outline
- Polarity: Indicated by direction of Zener symbol
- External surfaces corrosion resistant & terminal Solderable
- Weight: 16 grams
- Torque Setting: 3.5 Nm

Electrical Data

- Forward Voltage, $V_F = 1.5V$ max.
(at $I_F \leq 10A$, 300 μs square wave pulse)
- V_Z measured with pulse $\leq 100\mu s$
Duty cycle ≤ 0.001
- R_Z determined with DC plus 10%
superimposed AC @ 1KHZ



DO-203AB (DO-5)



STUD CATHODE NORMAL

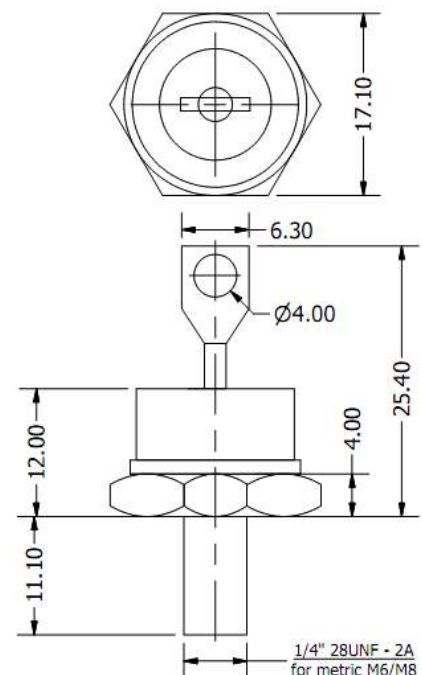


STUD ANODE REVERSE

Ordering Table

| BZY | 91C | - | R |
|-----|-----|---|---|
| 1 | 2 | 3 | 4 |

- 1 – Zener Diode
- 2 – Wattage = 75W
- 3 – Zener Voltage
- 4 – Polarity:
 - > None = Stud Cathode Normal
 - > R = Stud Anode Reverse



ALL DIMENSIONS IN MM

75W Zener Diodes

| Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified) | | | | | | | | |
|---|------------------------|-------------------------------|------|-----------|---|-----|---|-----|
| Stud Cathode Part number | Stud Anode Part number | Zener Voltage $V_Z @ I_Z$ (V) | | I_Z (A) | Zener Resistance $R_Z @ I_Z$ (Ω) | | Maximum Reverse Leakage Current $I_R @ V_R$ | |
| | | MIN | MAX | | Typ. | Max | (mA) | (V) |
| BZY91C7V5 | BZY91C7V5R | 7.0 | 7.9 | 5.0 | 0.04 | 0.2 | 5.0 | 5.1 |
| BZY91C8V2 | BZY91C8V2R | 7.7 | 8.7 | 5.0 | 0.06 | 0.3 | 5.0 | 5.6 |
| BZY91C9V1 | BZY91C9V1R | 8.5 | 9.6 | 2.0 | 0.08 | 0.4 | 5.0 | 6.2 |
| BZY91C10 | BZY91C10R | 9.4 | 10.6 | 2.0 | 0.08 | 0.4 | 1.0 | 6.8 |
| BZY91C11 | BZY91C11R | 10.4 | 11.6 | 2.0 | 0.08 | 0.4 | 1.0 | 7.5 |
| BZY91C12 | BZY91C12R | 11.4 | 12.7 | 2.0 | 0.10 | 0.5 | 1.0 | 8.2 |
| BZY91C13 | BZY91C13R | 12.4 | 14.1 | 2.0 | 0.10 | 0.5 | 1.0 | 9.1 |
| BZY91C15 | BZY91C15R | 13.8 | 15.6 | 2.0 | 0.12 | 0.6 | 1.0 | 10 |
| BZY91C16 | BZY91C16R | 15.3 | 17.1 | 2.0 | 0.12 | 0.6 | 1.0 | 11 |
| BZY91C18 | BZY91C18R | 16.8 | 19.1 | 1.0 | 0.14 | 0.7 | 1.0 | 12 |
| BZY91C20 | BZY91C20R | 18.8 | 21.2 | 1.0 | 0.16 | 0.8 | 1.0 | 13 |
| BZY91C22 | BZY91C22R | 20.8 | 23.3 | 1.0 | 0.16 | 0.8 | 1.0 | 15 |
| BZY91C24 | BZY91C24R | 22.7 | 25.9 | 1.0 | 0.18 | 0.9 | 1.0 | 16 |
| BZY91C27 | BZY91C27R | 25.1 | 28.9 | 1.0 | 0.20 | 1.0 | 1.0 | 18 |
| BZY91C30 | BZY91C30R | 28.0 | 32.0 | 1.0 | 0.22 | 1.1 | 1.0 | 20 |
| BZY91C33 | BZY91C33R | 31.0 | 35.0 | 1.0 | 0.24 | 1.2 | 1.0 | 22 |
| BZY91C36 | BZY91C36R | 34.0 | 38.0 | 1.0 | 0.26 | 1.3 | 1.0 | 24 |
| BZY91C39 | BZY91C39R | 37.0 | 41.0 | 0.5 | 0.28 | 1.4 | 1.0 | 27 |
| BZY91C43 | BZY91C43R | 40.0 | 46.0 | 0.5 | 0.30 | 1.5 | 1.0 | 30 |
| BZY91C47 | BZY91C47R | 44.0 | 50.0 | 0.5 | 0.34 | 1.7 | 1.0 | 33 |
| BZY91C51 | BZY91C51R | 48.0 | 54.0 | 0.5 | 0.36 | 1.8 | 1.0 | 36 |
| BZY91C56 | BZY91C56R | 52.0 | 60.0 | 0.5 | 0.40 | 2.0 | 1.0 | 39 |
| BZY91C62 | BZY91C62R | 58.0 | 66.0 | 0.5 | 0.44 | 2.2 | 1.0 | 43 |
| BZY91C68 | BZY91C68R | 64.0 | 72.0 | 0.5 | 0.48 | 2.4 | 1.0 | 47 |
| BZY91C75 | BZY91C75R | 70.0 | 79.0 | 0.5 | 0.51 | 2.6 | 1.0 | 51 |

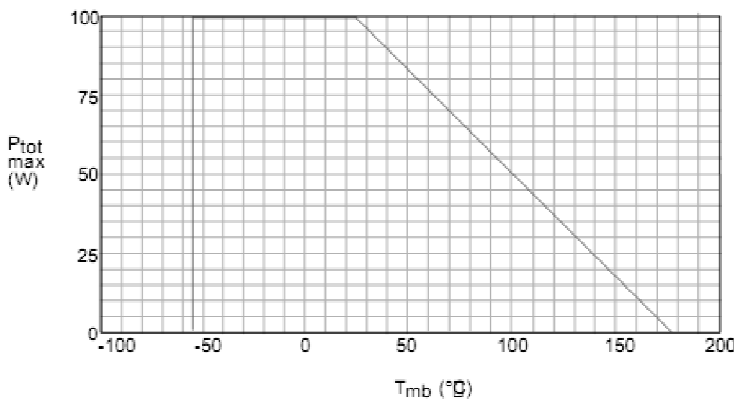


Figure 1. Maximum total dissipation plotted against mounting base temp

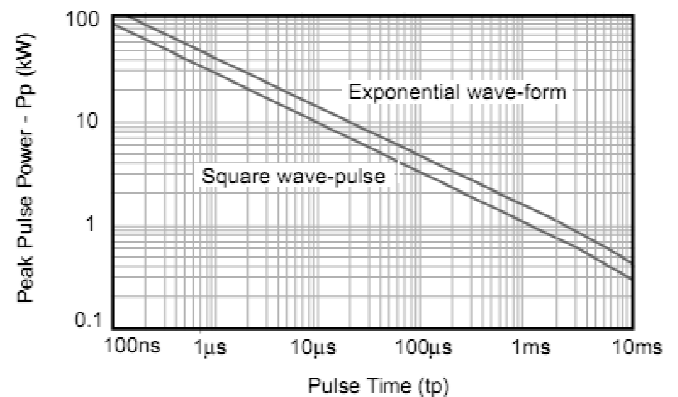


Figure 2. Non-repetitive peak pulse power rating curve