

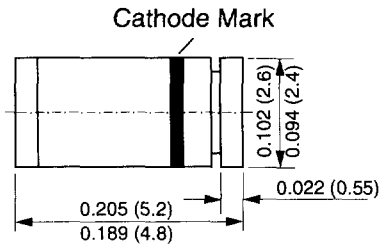


Zener Diodes

V_z Range 100 to 180V

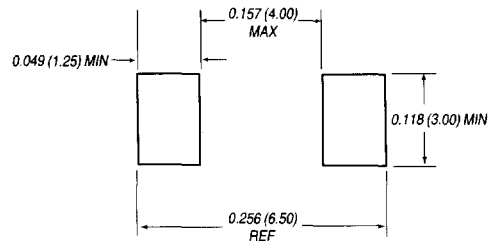
Power Dissipation 1.0W

Glass MELF



Dimensions in inches and (millimeters)

Mounting Pad Layout



Mechanical Data

Case: MELF Glass Case

Weight: approx. 0.25g

Packaging Codes/Options:

E4/5K per 13" reel (12mm tape), 10K/box
25/1.5K per 7" reel (12mm tape), 12K/box

Features

- Silicon Planar Power Zener Diodes
- For use in stabilizing and clipping circuits with higher power rating.
- The Zener voltages are graded according to the international E 12 standard. Smaller voltage tolerances are available upon request.
- These diodes are also available in the DO-41 case with the type designation ZPU100 ... ZPU180.

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | Value | Unit |
|--|-------------------|--------------------|------|
| Zener Current (see Table "Characteristics") | | | |
| Power Dissipation at T _{amb} = 25°C | P _{tot} | 1.0 ⁽¹⁾ | W |
| Thermal Resistance Junction to Ambient Air | R _{thJA} | 170 ⁽¹⁾ | °C/W |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature Range | T _s | -55 to +150 | °C |

Notes: (1) Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Type | Zener Voltage ⁽¹⁾ at I _{ZT} V _Z (V) | | Dynamic Resistance at I _{ZT} f = 1 kHz r _Z (Ω) | Temp. Coeff. of Zener Voltage at I _{ZT} α _{VZ} (10 ⁻⁴ /°C) | | Test current I _{ZT} (mA) | Reverse Voltage at I _R = 0.5 mA V _R (V) | Admissible Zener current ⁽²⁾ at T _{amb} = 25°C I _Z (mA) |
|--------|--|-----|--|---|-----|-----------------------------------|---|--|
| | Min | Max | | Min | Max | | | |
| ZMU100 | 88 | 110 | 140 (< 300) | +9 | +13 | 5 | > 75 | 7 |
| ZMU120 | 107 | 134 | 170 (< 330) | +9 | +13 | 5 | > 90 | 6 |
| ZMU150 | 130 | 165 | 200 (< 360) | +9 | +13 | 5 | > 112 | 5 |
| ZMU180 | 160 | 200 | 220 (< 380) | +9 | +13 | 5 | > 134 | 4 |

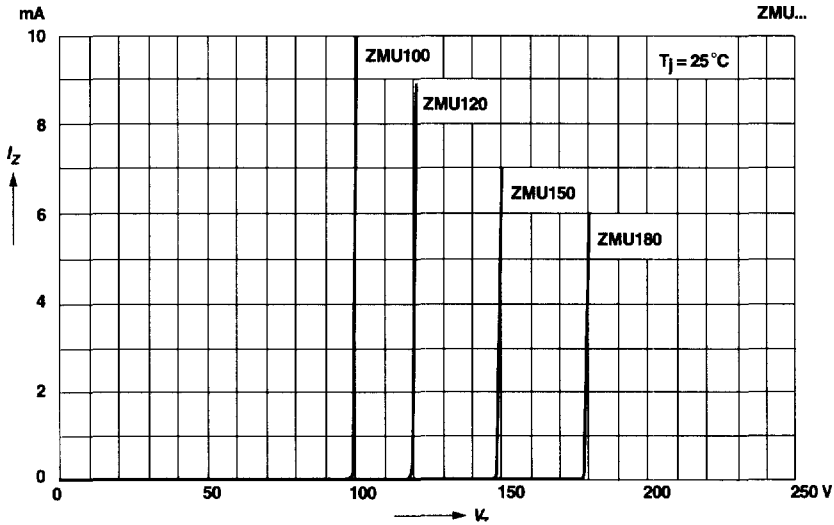
Notes: (1) Tested with pulses t_p = 5 ms

(2) Valid provided that electrodes are kept at ambient temperature

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

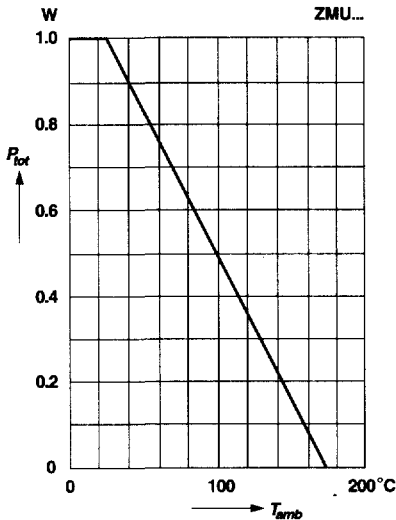
Breakdown characteristics

T_J = constant (pulsed)



Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept at ambient temperature



Pulse thermal resistance versus pulse duration

Valid provided that electrodes are kept at ambient temperature

