



GOOD-ARK

ZMU100 THRU ZMU180

SILICON PLANAR POWER ZENER DIODES

Features

Silicon Planar Power Zener Diodes

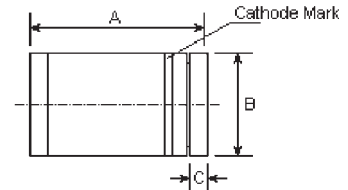
for use in stabilizing and clipping circuits with higher power rating. The Zener voltage are graded according to the international E12 standard. Smaller voltage tolerances on request.

These diodes are also available in DO-41 case with the type designation ZPU100 thru ZPU180.

These diodes are delivered taped.
Details see "Taping".

Weight approx. : 0.25g

MELF



| DIMENSIONS | | | | | |
|------------|--------|-------|------|------|------|
| DIM | inches | | mm | | Note |
| | Min. | Max. | Min. | Max. | |
| A | 0.189 | 0.205 | 4.8 | 5.2 | |
| B | 0.092 | 0.100 | 2.35 | 2.55 | φ |
| C | 0.016 | - | 0.4 | - | |

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

| | Symbols | Values | Units |
|---|-----------|------------------|------------------|
| Zener current see Table "Characteristics" | | | |
| Power dissipation at $T_{amb}=25^\circ\text{C}$ | P_{tot} | 1 ⁽¹⁾ | W |
| Junction Temperature | T_j | 175 | $^\circ\text{C}$ |
| Storage temperature range | T_s | -55 to +175 | $^\circ\text{C}$ |

Note:

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

Characteristics at $T_{amb}=25^\circ\text{C}$

| | Symbols | Min. | Typ. | Max. | Units |
|--|-----------|------|------|--------------------|-------|
| Thermal resistance junction to ambient Air | R_{thA} | - | - | 170 ⁽¹⁾ | K/W |

Note:

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

| Type | Zener voltage ²⁾ at I_{ZT} | Dynamic resistance at I_{ZT} $f=1\text{KHz}$ | Temp. coeff. of Zener Volt. at I_{ZT} | Test current | Reverse voltage at $I_R=0.5\mu\text{A}$ | Admissible Zener current ¹⁾ at $T_{\text{amb}}=25^\circ\text{C}$ |
|--------|--|--|--|--------------|--|---|
| | V_Z | r_{Zi} | α_{VZ} | I_{ZT} | V_R | I_{ZM} |
| | V | Ω | $10^{-4}/\text{K}$ | mA | V | mA |
| 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:

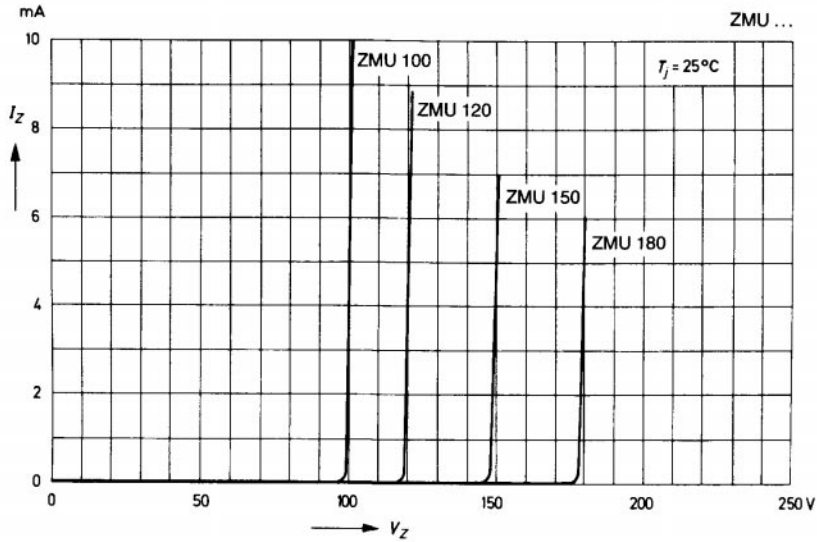
(1) Valid provided that electrodes are kept at ambient temperature.

(2) Tested with pulses $t_p=20\text{ms}$.

RATINGS AND CHARACTERISTIC CURVES

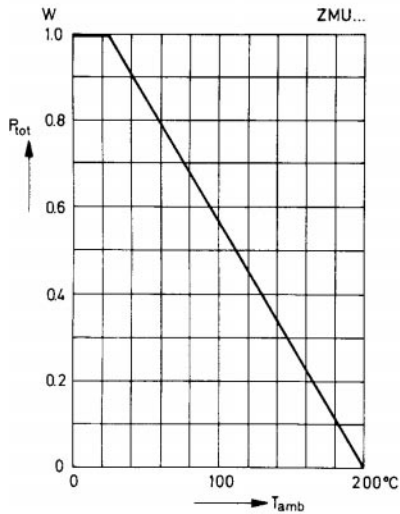
Breakdown characteristics

$T_j = \text{constant (pulsed)}$



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

