



ZMU100 thru ZMU180

Zener Diodes

V_Z Range: 100 to 180 Volts Power Dissipation: 1.0W

Features

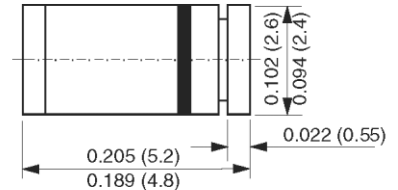
- ◆ Silicon Planar Power Zener Diodes
- ◆ For use in stabilizing and clipping circuits with higher power rating.
- ◆ The Zener voltages are graded according to the international E 12 standard. Smaller voltage tolerances are available upon request.
- ◆ These diodes are also available in the DO-41 case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



MELF (Glass)

Mechanical Data

- ◆ Case: MELF Glass Case
- ◆ Weight: approx. 0.25g



Maximum Ratings and Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Zener current (see Table "Characteristics")			
Power dissipation at $T_{amb}=25^{\circ}\text{C}$	P_{tot}	1.0 ⁽¹⁾	W
Thermal resistance junction to ambient air	$R_{\theta JA}$	170 ⁽¹⁾	$^{\circ}\text{C/W}$
Junction temperature	T_j	150	$^{\circ}\text{C}$
Storage temperature range	T_s	-55 to +150	$^{\circ}\text{C}$

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

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Type number	Zener voltage ⁽¹⁾ at I_{ZT} V_Z (Volts)		Dynamic resistance at I_{ZT} $f=1\text{kHz}$ r_{z1} (Ω)	Temp. coeff. of zener voltage at I_{ZT} α_{VZ} ($10^{-4} / ^{\circ}\text{C}$)		Test current I_{ZT} (mA)	Reverse voltage at $I_R=0.5\mu\text{A}$ V_R (Volts)	Admissible zener current ⁽²⁾ at $T_{amb}=25^{\circ}\text{C}$ 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

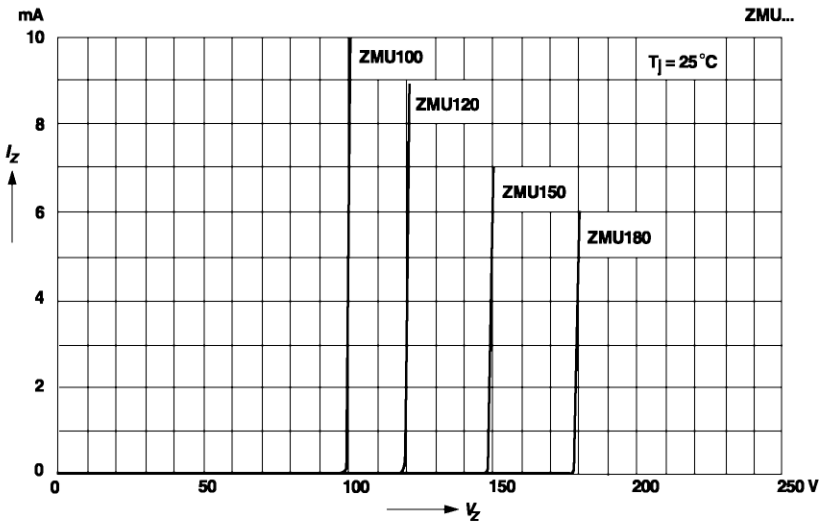
Notes: 1. Tested with pulses $t_p=5\text{ ms}$
2. Valid provided that electrodes are kept at ambient temperature

RATINGS AND CHARACTERISTIC CURVES

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

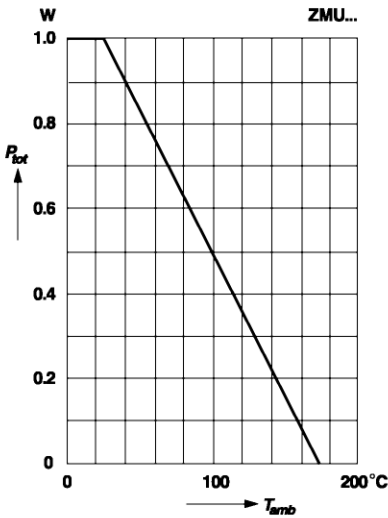
Breakdown characteristics

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



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

