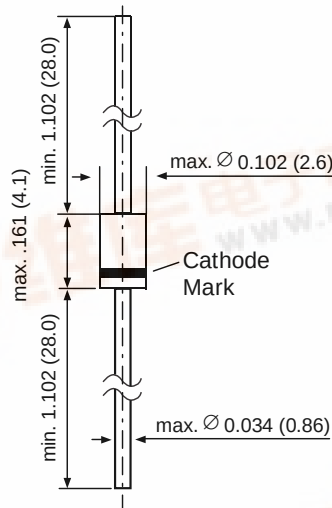


ZPU100 THRU ZPU180

ZENER DIODES

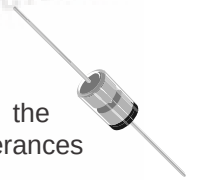
DO-41 Glass



Dimensions in inches and (millimeters)

FEATURES

- ◆ Silicon Planar 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 types are also available in MELF case with the type designation ZMU100 ... ZMU180.



MECHANICAL DATA

Case: DO-41 Glass Case

Weight: approx. 0.35 g

MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOL	VALUE	UNIT
Zener Current (see Table "Characteristics")			
Power Dissipation at $T_{amb} = 25^{\circ}\text{C}$	P_{tot}	1.3 ⁽¹⁾	W
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_s	- 55 to +175	°C

NOTES:

(1) Valid provided that leads at a distance of 10 mm from case are kept at ambient temperature.

ZPU100 THRU ZPU180

ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance Junction to Ambient Air	R_{thJA}	—	—	130 ⁽¹⁾	°C/W

NOTES:

(1) Valid provided that leads at a distance of 10 mm from case are kept at ambient temperature.

Type	Zener voltage ⁽²⁾ at I_{ZT} V_Z (V)	Dynamic Resistance at I_{ZT} $f = 1$ kHz r_{Zj} (Ω)	Temp. Coeff. of Zener Voltage at I_{ZT} $\alpha_{VZ} 10^{-4}/K$	Test current I_{ZT} (mA)	Reverse Voltage at $I_R = 0.5 \mu A$ V_R (V)	Admissible Zener current ⁽¹⁾ at $T_{amb} = 25^\circ C$ I_Z (mA)
ZPU100	88 ... 110	140 (< 300)	+9 ... +13	5	> 75	10
ZPU120	107 ... 134	170 (< 330)	+9 ... +13	5	> 90	8.5
ZPU150	130 ... 165	200 (< 360)	+9 ... +13	5	> 112	7
ZPU180	160 ... 200	220 (< 380)	+9 ... +13	5	> 134	5.5

NOTES:

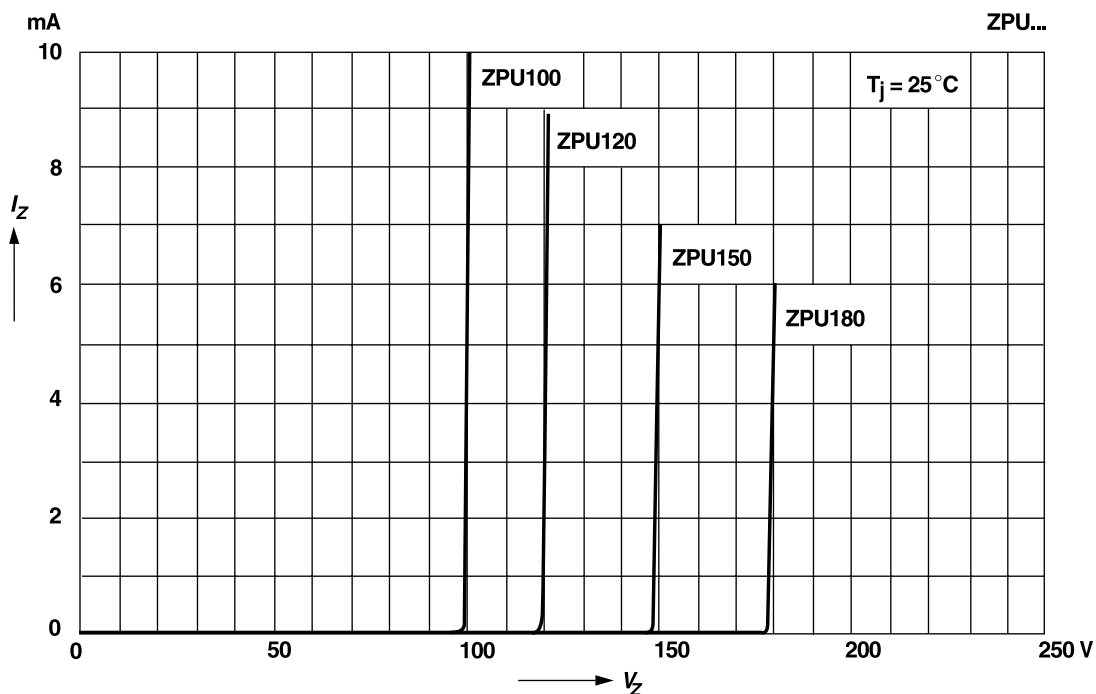
(1) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

(2) Tested with pulses $t_p = 5$ ms

RATINGS AND CHARACTERISTIC CURVES ZPU100 THRU ZPU180

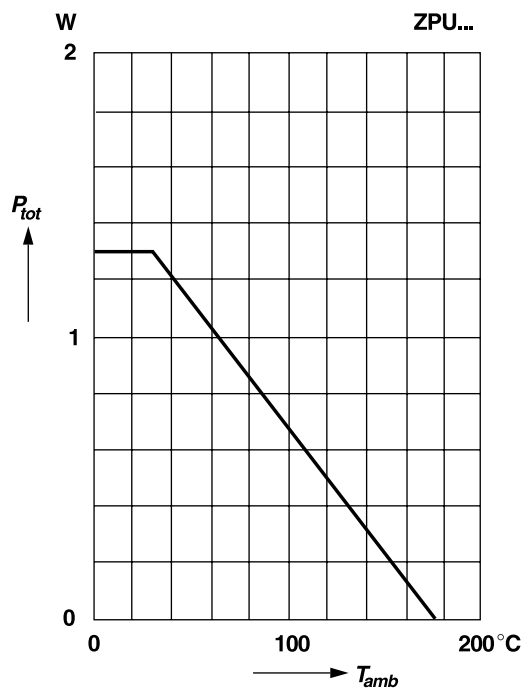
Breakdown characteristics

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



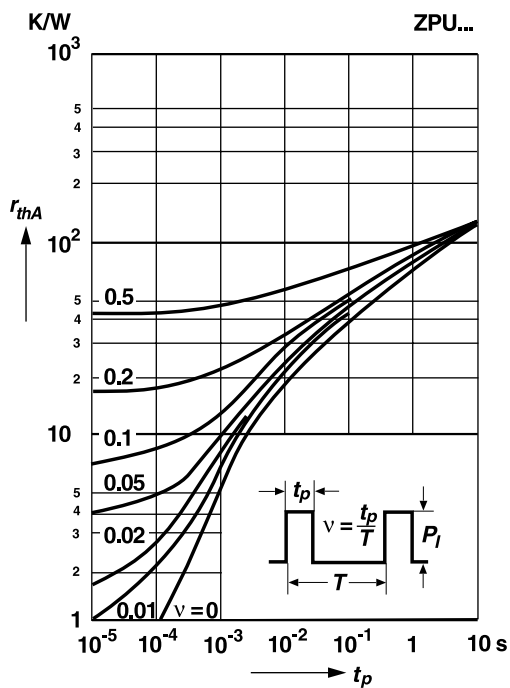
Admissible power dissipation versus ambient temperature

Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case



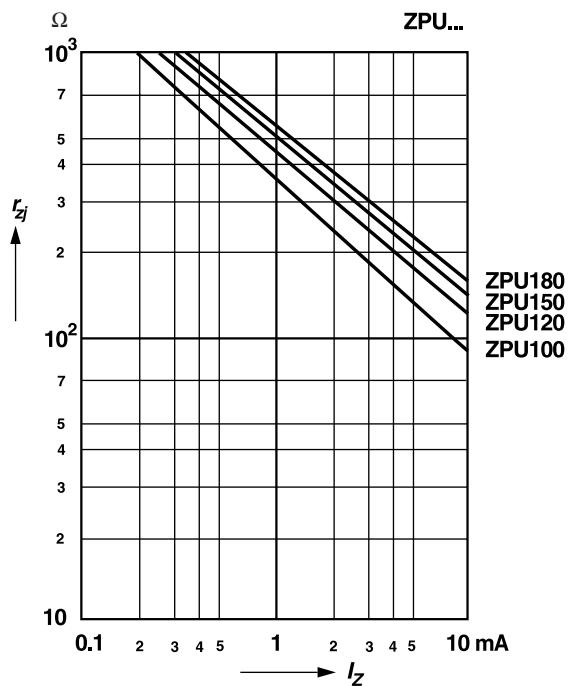
Pulse thermal resistance versus pulse duration

Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.



RATINGS AND CHARACTERISTIC CURVES ZPU100 THRU ZPU180

Dynamic resistance
versus Zener current



Thermal resistance
versus lead length

