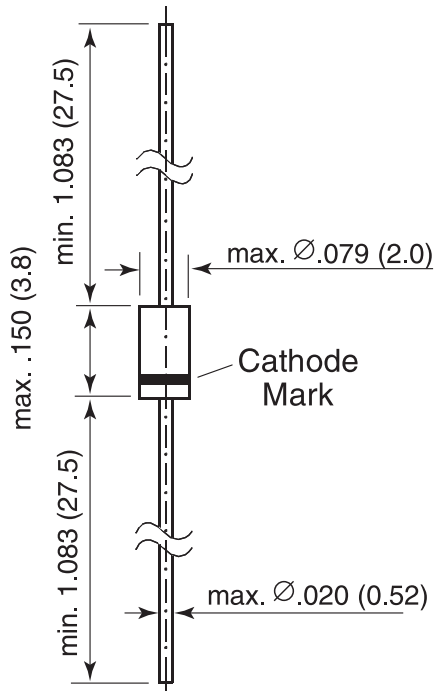




Small-Signal Diode

DO-35 Glass



Dimensions in inches and (millimeters)

Features

- Silicon Epitaxial Planar Diode
- Fast switching diode.
- This diode is also available in other case styles including the SOD-123 case with the type designation 1N4148W, the MiniMELF case with the type designation LL4148, the SOT-23 case with the type designation IMBD4148.

Mechanical Data

Case: DO-35 Glass Case

Weight: approx. 0.13g

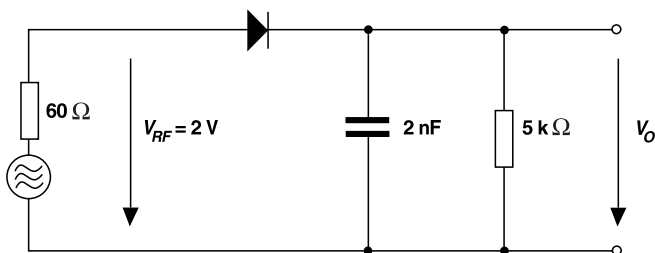
Maximum Ratings and Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Average Rectified Current Half Wave Rectification with Resistive Load at $T_{amb} = 25^\circ\text{C}$	$I_{F(AV)}$	150 ⁽¹⁾	mA
Surge Forward Current at $t < 1\text{s}$ and $T_j = 25^\circ\text{C}$	I_{FSM}	500	mA
Power Dissipation at $T_{amb} = 25^\circ\text{C}$ ⁽¹⁾	P_{tot}	500	mW
Thermal Resistance Junction to Ambient Air ⁽¹⁾	$R_{\theta JA}$	350	$^\circ\text{C}/\text{W}$
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature	T_s	-65 to +175	$^\circ\text{C}$

Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	V _{(BR)R}	I _R = 100μA	100			V
Forward Voltage	V _F	I _F = 10mA	—	—	1.0	V
Leakage Current	I _R	V _R = 20V	—	—	25	nA
		V _R = 75V	—	—	5	μA
		V _R = 20V, T _J = 150°C	—	—	50	μA
Capacitance	C _{tot}	V _F = V _R = 0V	—	—	4	pF
Voltage Rise when Switching ON <small>(tested with 50mA Pulses)</small>	V _{fr}	t _p = 0.1μs, Rise time < 30ns f _p = 5 to 100kHz	—	—	2.5	ns
Reverse Recovery Time	t _{rr}	I _F = 10mA, I _R = 1mA, V _R = 6V, R _L = 100Ω	—	—	4	ns
Rectification Efficiency	η _v	f = 100MHz, V _{RF} = 2V	0.45	—	—	—

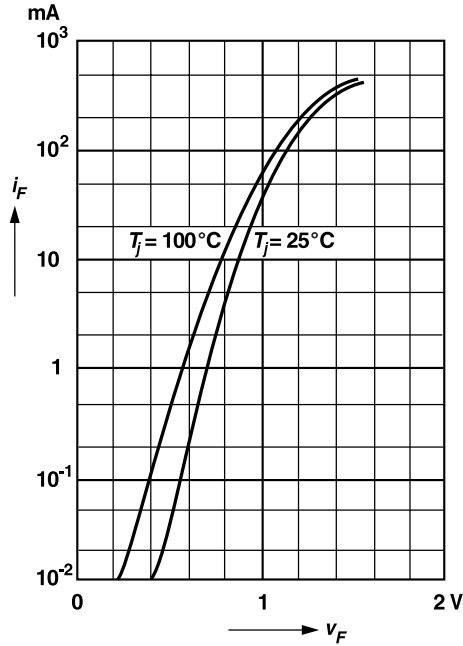
Rectification Efficiency Measurement Circuit



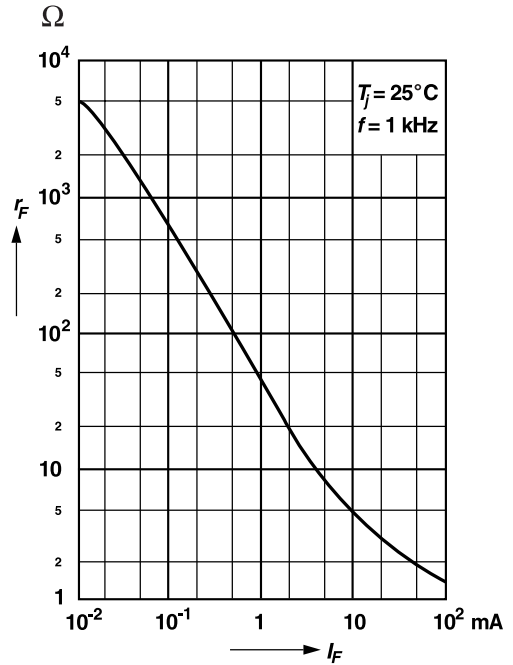


Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Forward characteristics

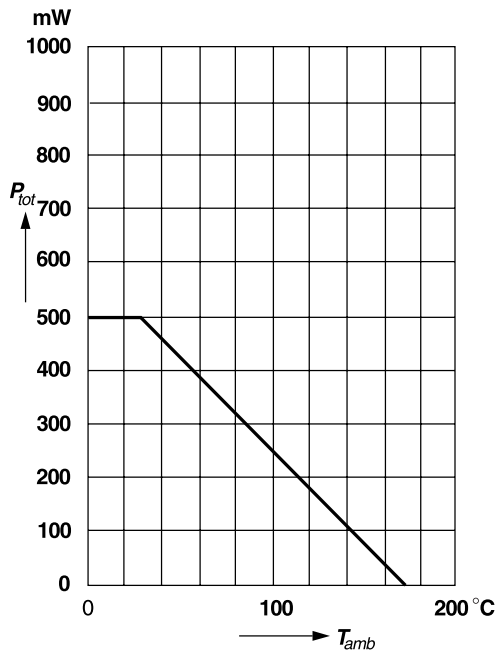


Dynamic forward resistance versus forward current

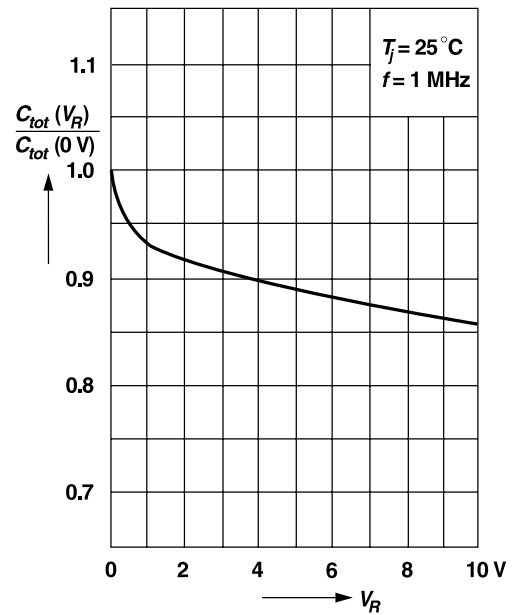


Admissible power dissipation versus ambient temperature

For conditions, see footnote in table "Absolute Maximum Ratings"



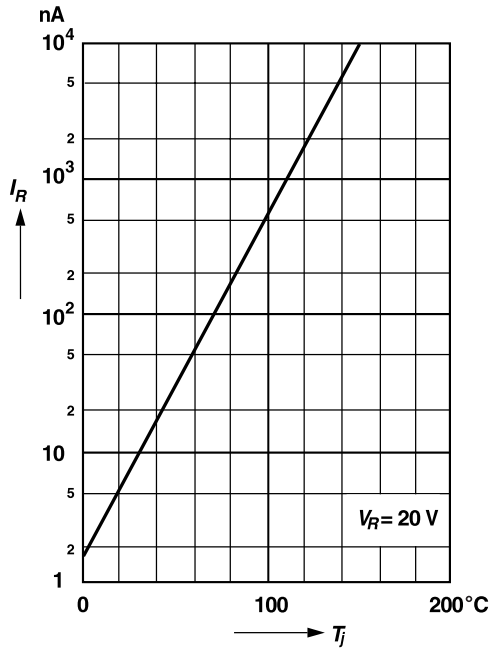
Relative capacitance versus reverse voltage





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

Leakage current versus junction temperature



Admissible repetitive peak forward current versus pulse duration

For conditions, see footnote in table "Absolute Maximum Ratings"

