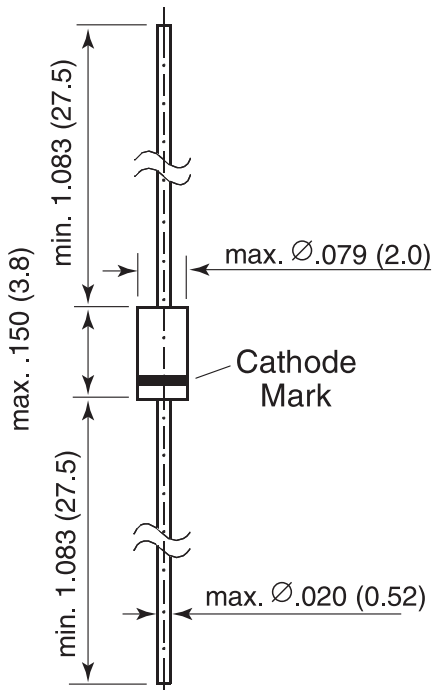


## Small-Signal Diode

### 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

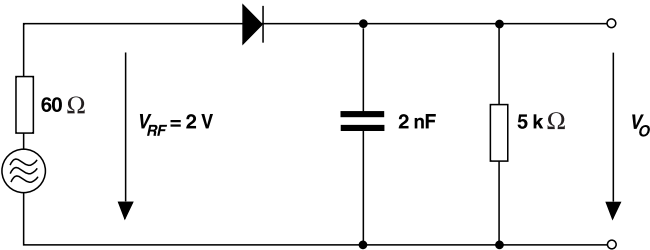
### Maximum Ratings and Thermal Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

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 <sup>(1)</sup>	mA
Surge Forward Current at $t < 1\text{s}$ and $T_j = 25^\circ\text{C}$	$I_{FSM}$	500	mA
Power Dissipation at $T_{amb} = 25^\circ\text{C}$ <sup>(1)</sup>	$P_{tot}$	500	mW
Thermal Resistance Junction to Ambient Air <sup>(1)</sup>	$R_{\theta JA}$	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<sub>J</sub> = 25°C unless otherwise noted)

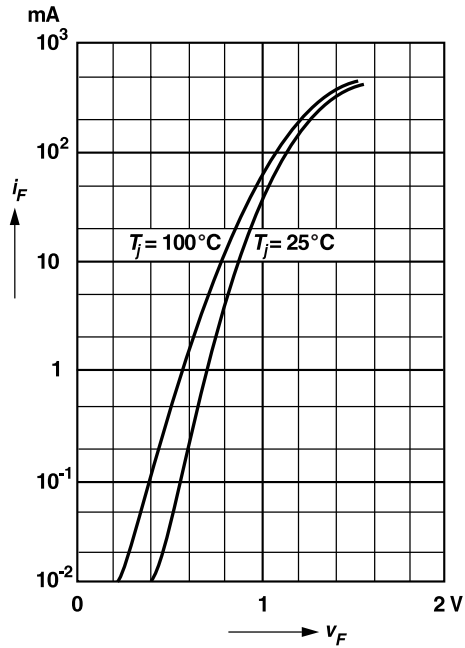
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	I <sub>R</sub> = 100μA	100			V
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 10mA	—	—	1.0	V
Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 20V	—	—	25	nA
		V <sub>R</sub> = 75V	—	—	5	μA
		V <sub>R</sub> =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

**Rectification Efficiency Measurement Circuit**

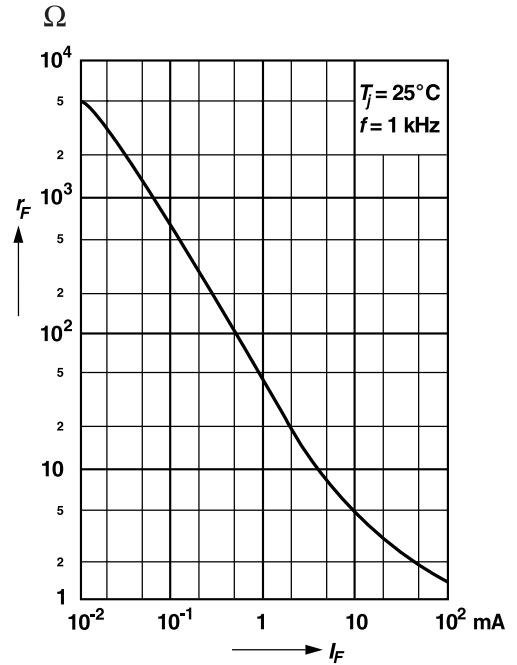


## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

**Forward characteristics**

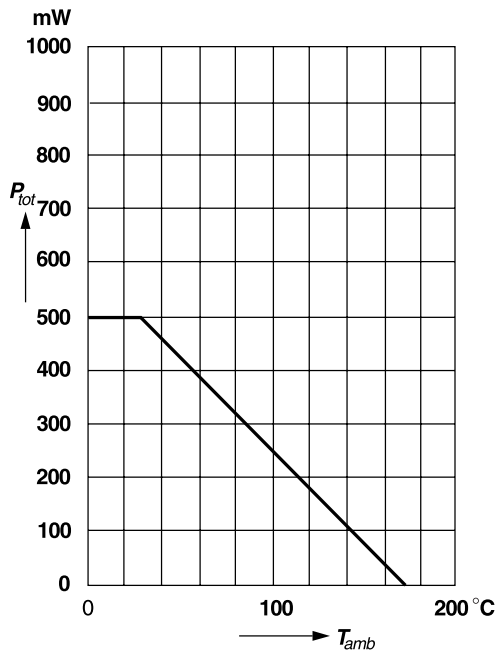


**Dynamic forward resistance versus forward current**

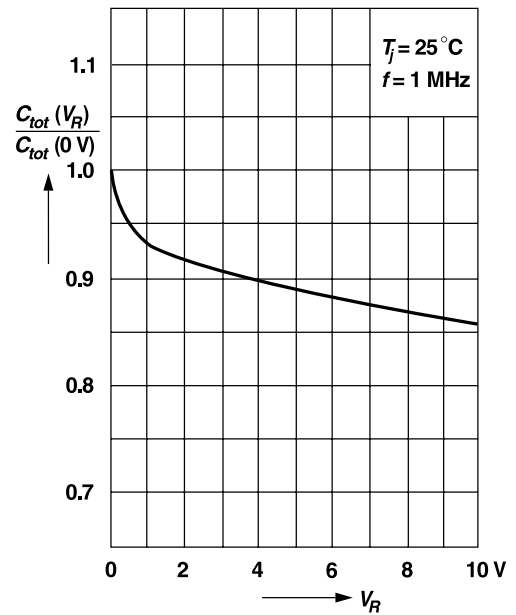


**Admissible power dissipation versus ambient temperature**

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

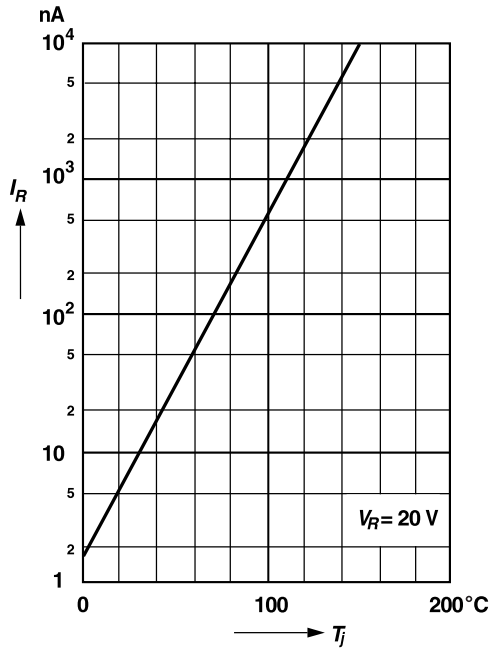


**Relative capacitance versus reverse voltage**



**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"

