

## Features

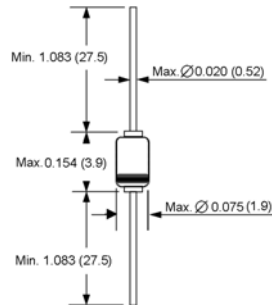
- ◆ Silicon Epitaxial Planar Diode
- ◆ Fast switching diode
- ◆ This diode is also available in other case styles including the MiniMELF case with the type designation LL4148, and the DO-34 case with type designation 1N4148S.



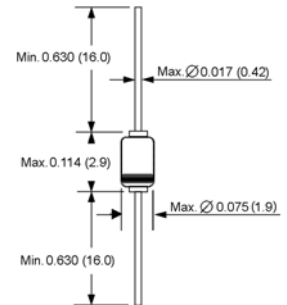
## Mechanical Data

- ◆ Case: DO-34, DO-35 Glass Case
- ◆ Weight: approx. 0.13g

DO-204AH (DO-35 Glass)



DO-34 Glass



## Maximum Ratings and Thermal Characteristics

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

Parameter	Symbol	Limit	Unit
Reverse voltage	$V_R$	75	Volts
Peak reverse voltage	$V_{RM}$	100	Volts
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 range	$T_S$	-65 to +175	$^\circ\text{C}$

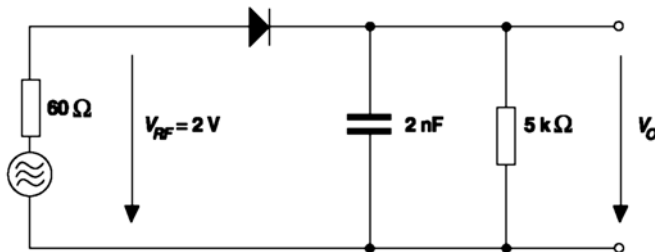
**Notes:** 1. Valid provided that leads at a distance of 8mm from case are kept at ambient temperature

## Electrical Characteristics

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	$V_{(BR)R}$	$I_R=100\mu\text{A}$	100			Volts
Forward voltage	$V_F$	$I_F=10\text{mA}$	-	-	1.0	Volt
Leakage current	$I_R$	$V_R=20\text{V}$ $V_R=75\text{V}$ $V_R=20\text{V}, T_j=150^\circ\text{C}$	-	-	25 5.0 50	nA $\mu\text{A}$ $\mu\text{A}$
Capacitance	$C_{tot}$	$V_F=V_R=0\text{V}$	-	-	4.0	pF
Voltage rise when switching ON (tested with 50mA pulses)	$V_{fr}$	$t_p = 0.1\text{s}$ , Rise time < 30ns $f_p=5$ to 100kHz	-	-	2.5	ns
Reverse recovery time	$t_{rr}$	$I_F=10\text{mA}$ , $I_R=1\text{mA}$ $V_R=6\text{V}$ , $R_L=100\Omega$	-	-	4.0	ns
Rectification efficiency	$\eta_V$	$f=100\text{MHz}$ , $V_{RF}=2\text{V}$	0.45	-	-	-

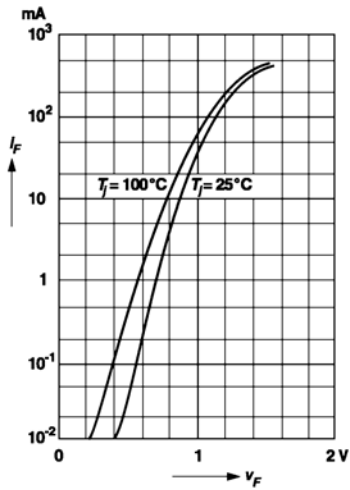
### Rectification Efficiency Measurement Circuit



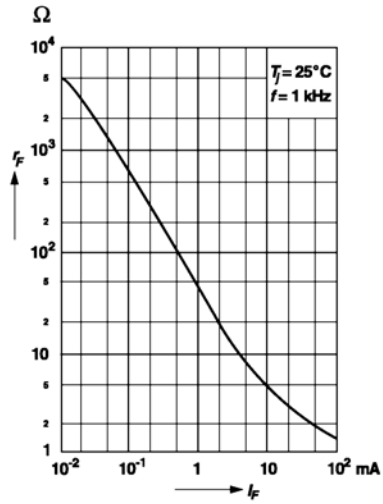
# RATINGS AND CHARACTERISTIC CURVES

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

**Forward characteristics**

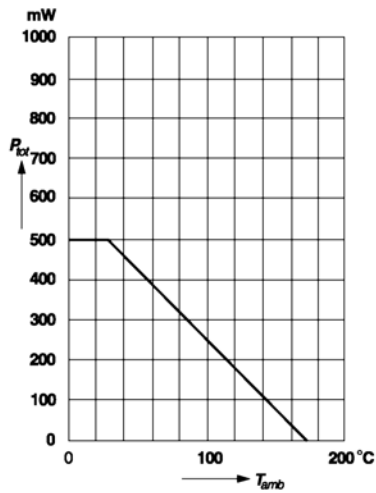


**Dynamic forward resistance versus forward current**

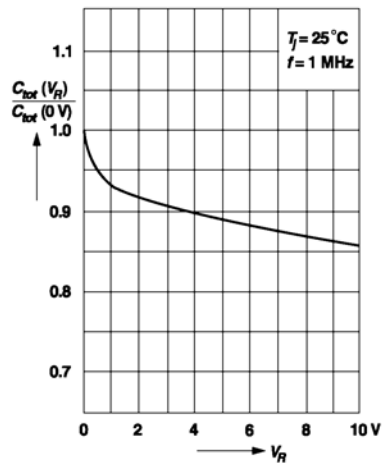


**Admissible power dissipation versus ambient temperature**

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



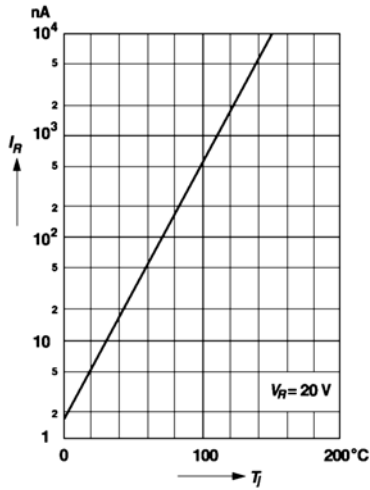
**Relative capacitance versus reverse voltage**



# RATINGS AND CHARACTERISTIC CURVES

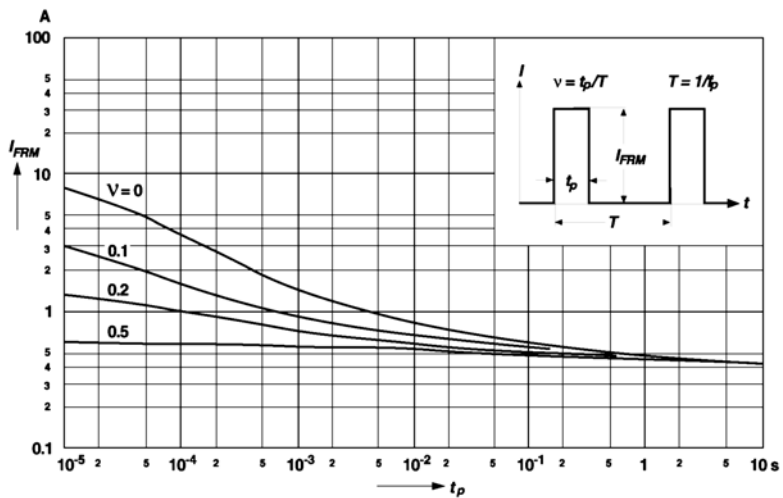
( $T_A = 25^\circ\text{C}$  unless otherwise noted)

**Leakage current versus junction temperature**



**Admissible repetitive peak forward current versus pulse duration**

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



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