

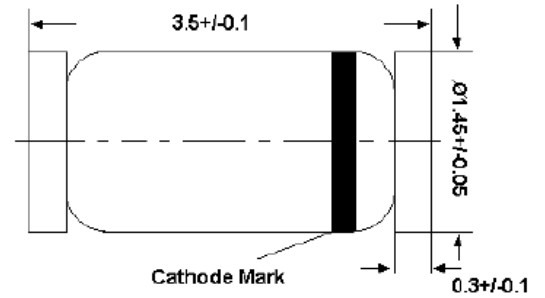
# LL4148

## Silicon Epitaxial Planar Switching Diode

### FEATURES

- ◆ Fast switching diode in MiniMELF case especially suited for automatic surface mounting

### LL-34



**Glass case MiniMELF  
Dimensions in mm**

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

PARAMETER	SYMBOL	VALUE	UNIT
Peak Reverse Voltage	$V_{RM}$	100	V
Reverse Voltage	$V_R$	75	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Non-repetitive Peak Forward Surge Current at $t = 1$ s	$I_{FSM}$	0.5	A
at $t = 1$ ms		1	
at $t = 1$ $\mu$ s		4	
Power Dissipation	$P_{tot}$	500 <sup>1)</sup>	mW
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 175	$^\circ\text{C}$

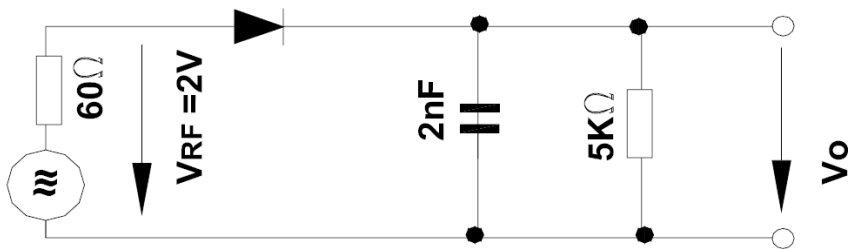
<sup>1)</sup>Valid provided that electrodes are kept at ambient temperature.

# LL4148

## Characteristics at Ta = 25°C

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Forward Voltage at $I_F = 10 \text{ mA}$	$V_F$	-	1	V
Leakage Current at $V_R = 20 \text{ V}$	$I_R$	-	25	nA
at $V_R = 75 \text{ V}$	$I_R$	-	5	$\mu\text{A}$
at $V_R = 20 \text{ V}, T_j = 150^\circ\text{C}$	$I_R$	-	50	$\mu\text{A}$
Reverse Breakdown Voltage tested with $100 \mu\text{A}$ Pulses	$V_{(BR)R}$	100	-	V
Capacitance at $V_R = 0, f = 1 \text{ MHz}$	$C_{tot}$	-	4	pF
Voltage Rise when Switching ON tested with $50 \text{ mA}$ Forward Pulses $t_p = 0.1 \text{ s}$ , Rise Time < $30 \text{ ns}$ , $f_p = 5 \text{ to } 100 \text{ KHz}$	$V_{fr}$	-	2.5	V
Reverse Recovery Time at $I_F = 10 \text{ mA}$ to $I_R = 1 \text{ mA}$ , $V_R = 6 \text{ V}$ , $R_L = 100 \Omega$	$t_{rr}$	-	4	ns
Thermal Resistance Junction to Ambient Air	$R_{thA}$	-	$0.35^{1)}$	K/mW
Rectification Efficiency at $f = 100 \text{ MHz}$ , $V_{RF} = 2 \text{ V}$	$\eta_V$	0.45	-	-

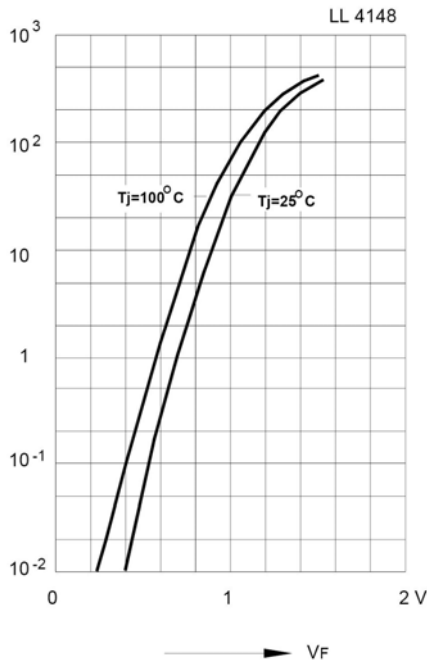
<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.



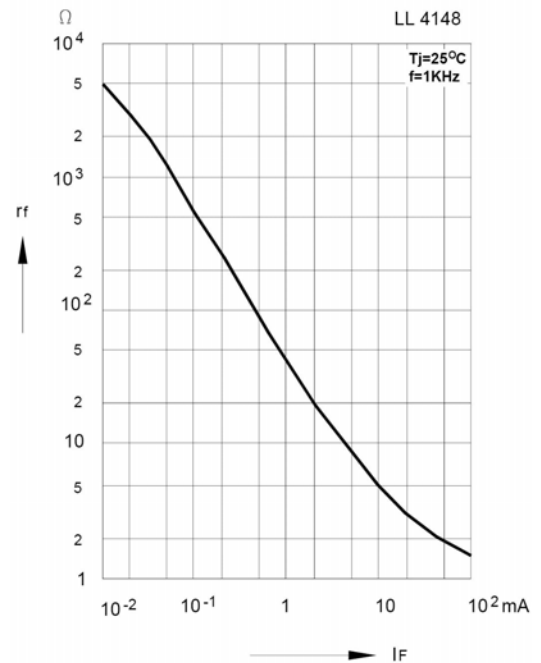
**Rectification Efficiency Measurement Circuit**

# LL4148

**Forward characteristics**

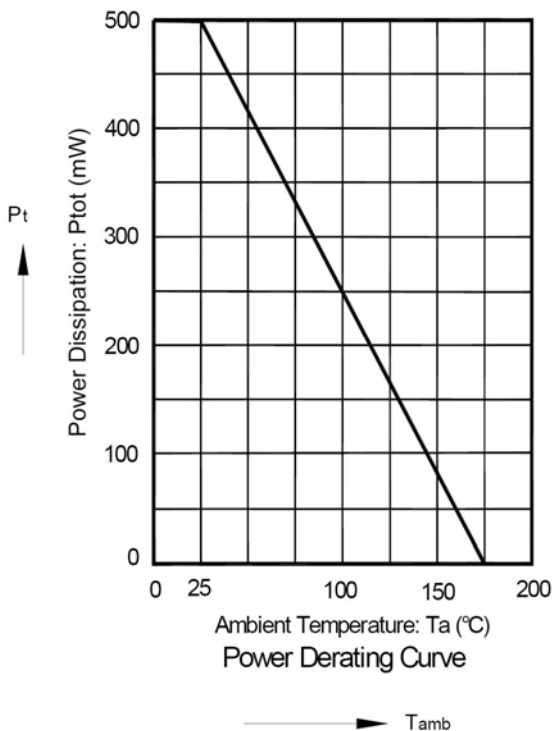


**Dynamic forward resistance versus forward current**

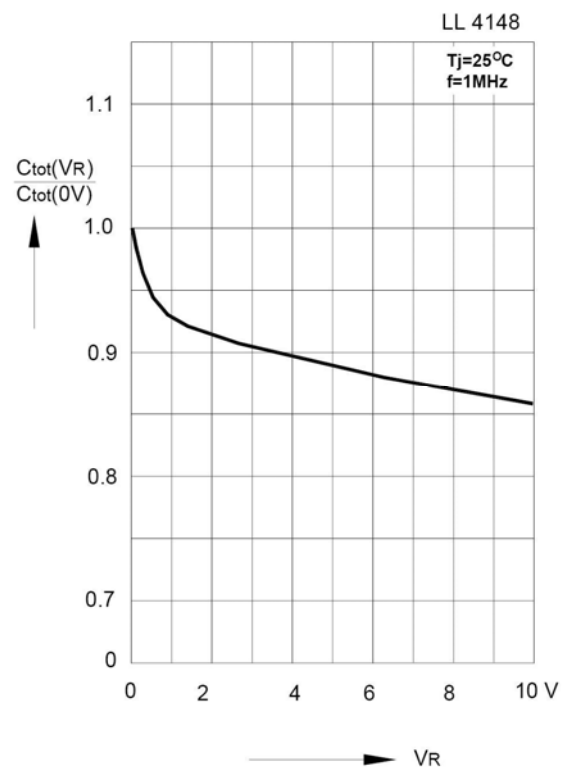


**Admissible power dissipation versus ambient temperature**

Valid provided that electrodes are kept at ambient temperature

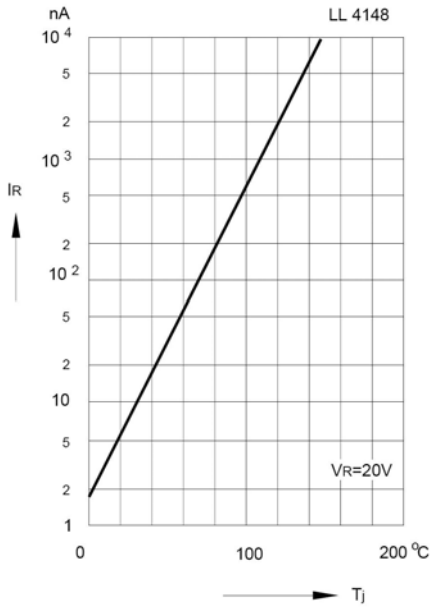


**Relative capacitance versus reverse voltage**



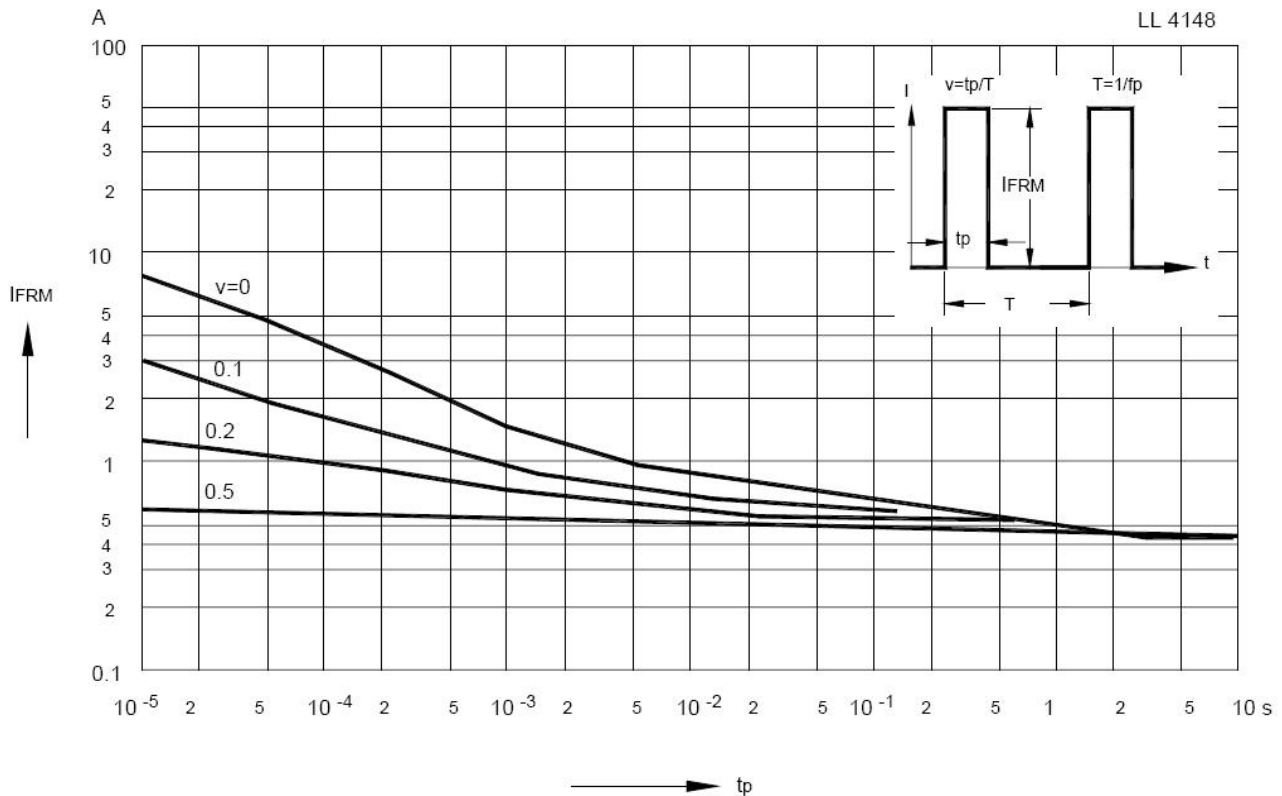
# LL4148

## Leakage current versus junction temperature



## Admissible repetitive peak forward current versus pulse duration

Valid provided that electrodes are kept at ambient temperature



Note: Specifications are subject to change without notice.