

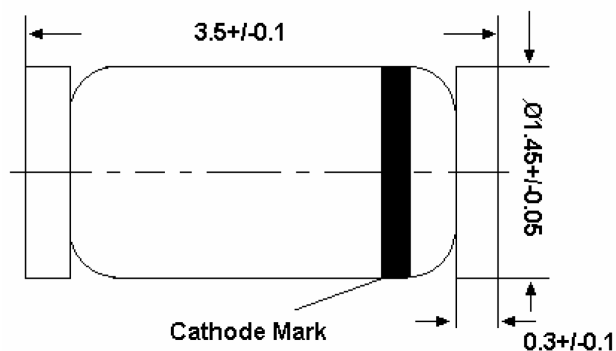
## LL4148

## 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

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

## Absolute Maximum Ratings (Ta = 25°C)

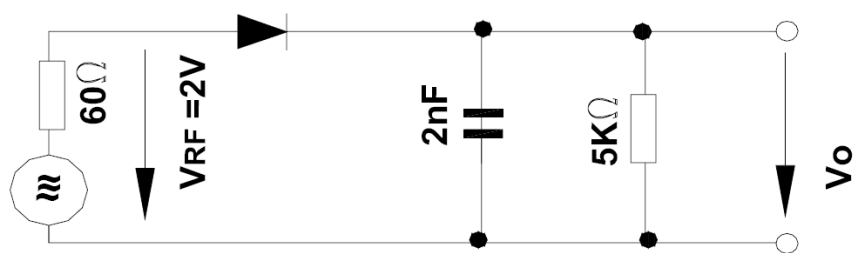
PARAMETER	SYMBOL	VALUE	UNIT
Peak Reverse Voltage	V <sub>RM</sub>	100	V
Reverse Voltage	V <sub>R</sub>	75	V
Average Rectified Forward Current	I <sub>F(AV)</sub>	200	mA
Non-repetitive Peak Forward Surge Current	I <sub>FSM</sub>	at t = 1 s	0.5
		at t = 1 ms	1
		at t = 1 μs	4
Power Dissipation	P <sub>tot</sub>	500 <sup>1)</sup>	mW
Junction Temperature	T <sub>j</sub>	175	°C
Storage Temperature Range	T <sub>stg</sub>	- 65 to + 175	°C

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

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	-	-

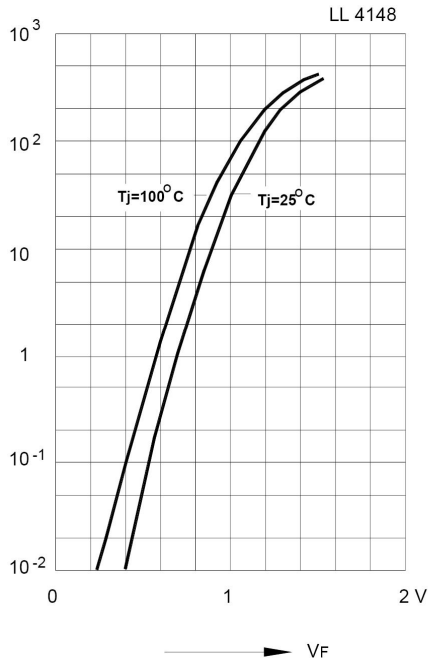
<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.



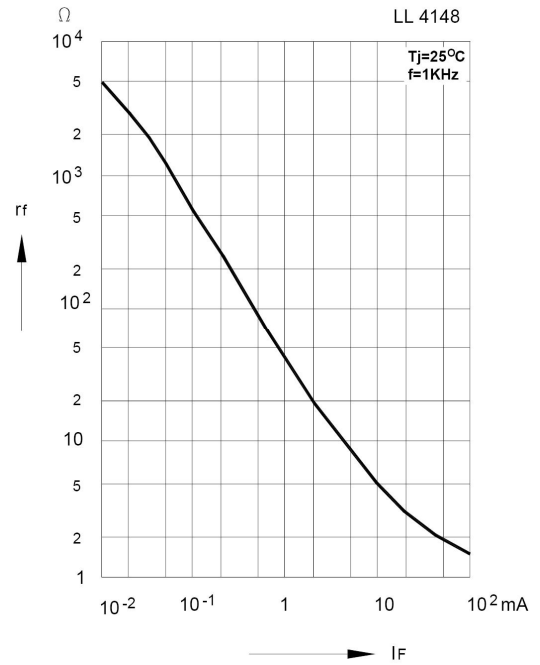
Rectification Efficiency Measurement Circuit

RATINGS AND CHARACTERISTIC CURVES LL4148

Forward characteristics

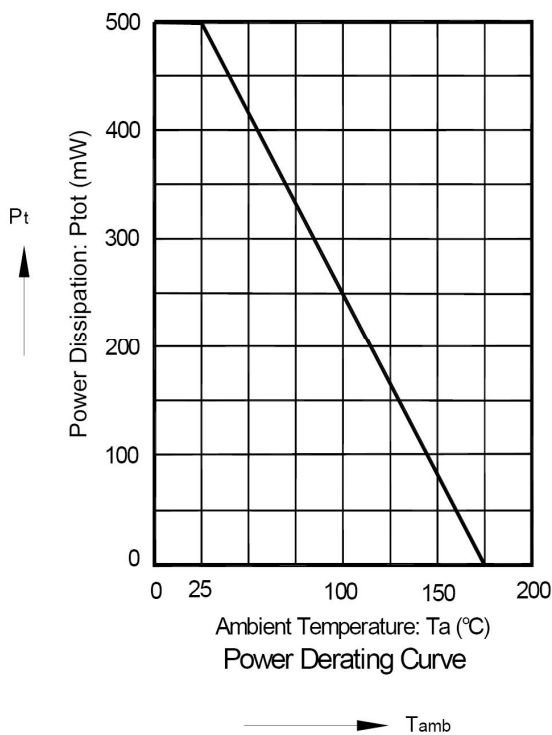


Dynamic forward resistance versus forward current

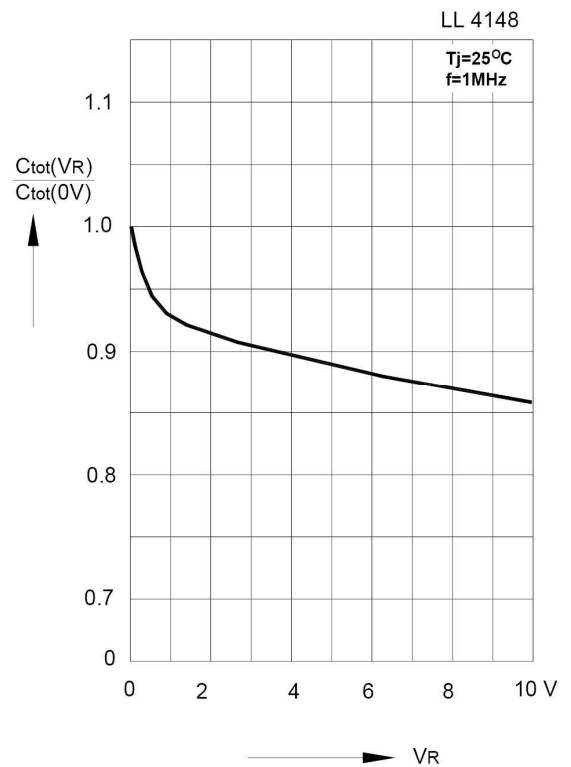


Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

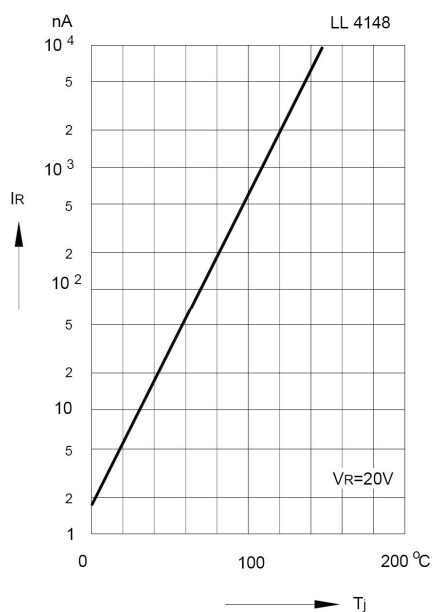


Relative capacitance versus reverse voltage



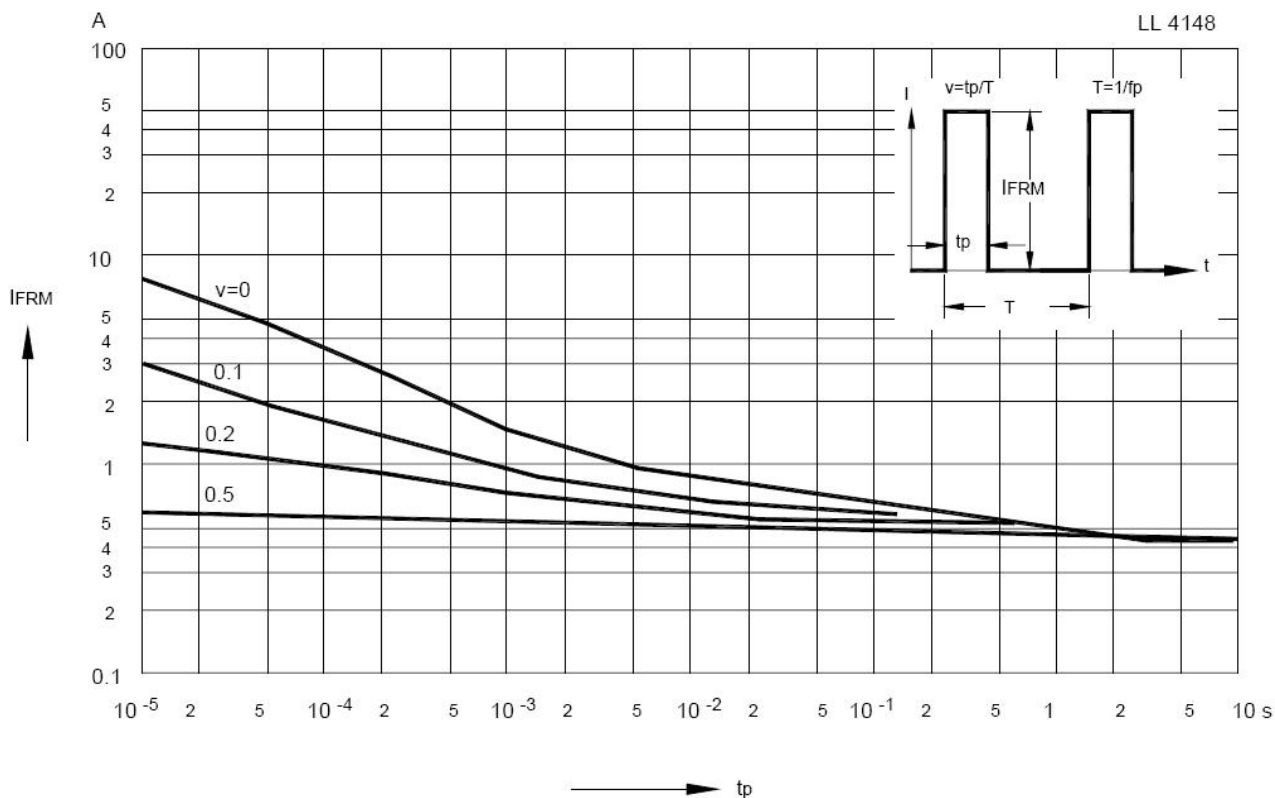
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Leakage current  
versus junction temperature



Admissible repetitive peak forward current versus pulse duration

Valid provided that electrodes are kept at ambient temperature



Note: Specification are subject to change without notice. For more detail and update, please visit our website.