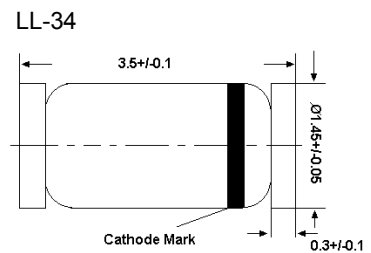


## LL4148

### Silicon Epitaxial Planar Switching Diode

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



Glass case MiniMELF  
Dimensions in mm

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

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	$I_{FSM}$	0.5	A
at t = 1 s		1	
at t = 1 ms		4	
at t = 1 $\mu$ s			
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	$^\circ\text{C}$

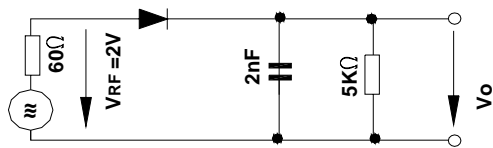
<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

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### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

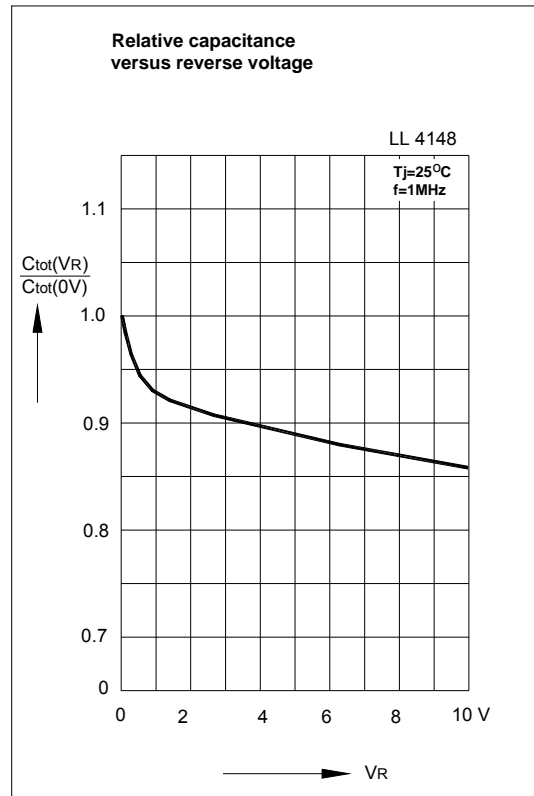
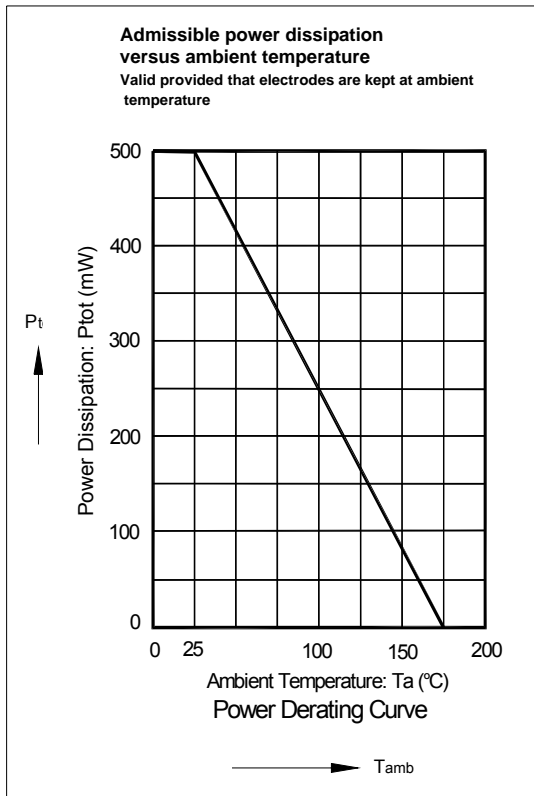
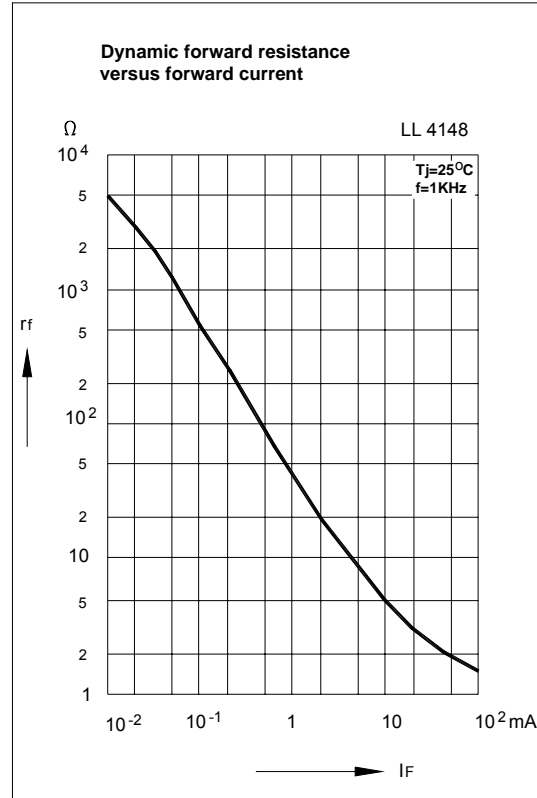
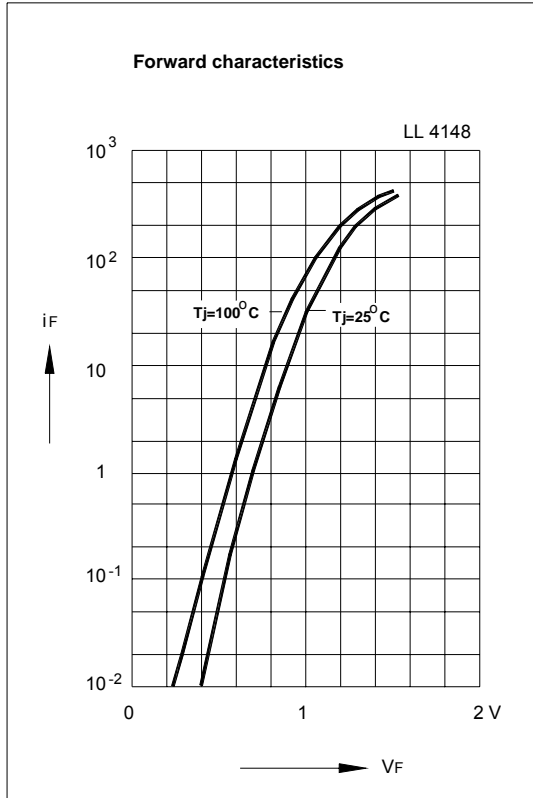
Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 10\text{ mA}$	$V_F$	-	1	V
Leakage Current at $V_R = 20\text{ V}$ at $V_R = 75\text{ V}$ at $V_R = 20\text{ V}, T_j = 150\text{ }^\circ\text{C}$	$I_R$ $I_R$ $I_R$	- - -	25 5 50	nA $\mu\text{A}$ $\mu\text{A}$
Reverse Breakdown Voltage tested with $100\text{ }\mu\text{A}$ 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 $I_R = 1\text{ mA}$ , $V_R = 6\text{ V}$ , $R_L = 100\text{ }\Omega$	$t_{rr}$	-	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



## LL4148

