

# LL4148PF

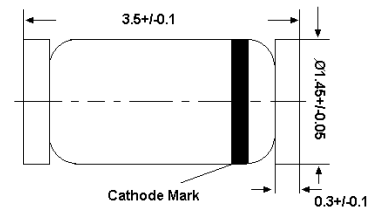
## Silicon Epitaxial Planar Switching Diode

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

### Features

- Lead Free

LL-34



Glass case MiniMELF  
Dimensions in mm

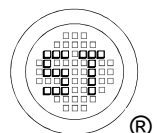
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

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	$I_{FSM}$	0.5	A
at $t = 1$ s		1	
at $t = 1$ ms		4	
at $t = 1$ $\mu$ s			
Power Dissipation	$P_{tot}$	500	mW
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 175	$^\circ\text{C}$

### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction Ambient <sup>1)</sup>	$R_{\theta JA}$	300	$^\circ\text{C/W}$

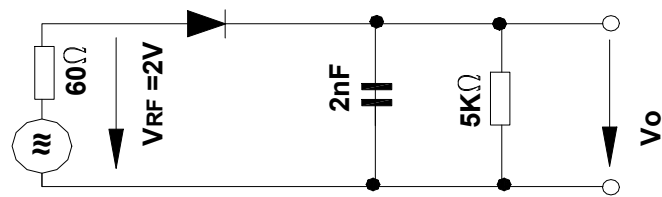
<sup>1)</sup>Valid provided that electrodes are kept at ambient temperature.



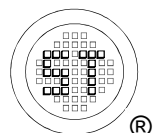
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## Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage tested with 100 $\mu\text{A}$ Pulses	$V_{(BR)R}$	100	-	V
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 $V_R = 20 \text{ V}$ , $T_j = 150^\circ\text{C}$	$I_R$ $I_R$ $I_R$	- - -	25 5 50	nA $\mu\text{A}$ $\mu\text{A}$
Capacitance at $V_R = 0$ , $f = 1 \text{ MHz}$	$C_{tot}$	-	4	pF
Voltage Rise when Switching on tested with 50 mA Forward Pulses $t_p = 0.1 \text{ s}$ , Rise Time < 30 ns, $f_p = 5$ to 100 KHz	$V_{fr}$	-	2.5	V
Reverse Recovery Time at $I_F = 10 \text{ mA}$ , $I_{rr} = 0.1 \times I_R$ , $V_R = 6 \text{ V}$ , $R_L = 100 \Omega$	$t_{rr}$	-	4	ns
Rectification Efficiency at $f = 100 \text{ MHz}$ , $V_{RF} = 2 \text{ V}$	$\eta_V$	0.45	-	-



**Rectification Efficiency Measurement Circuit**



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## Electrical Characteristics Curves

Fig 1. Forward Characteristics

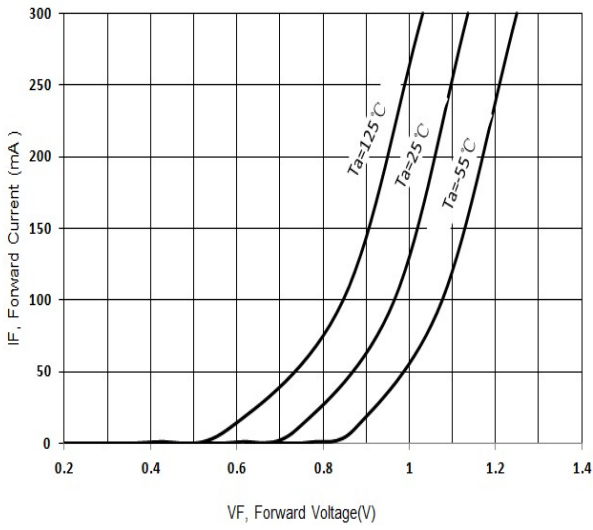


Fig 2. Reverse Characteristics

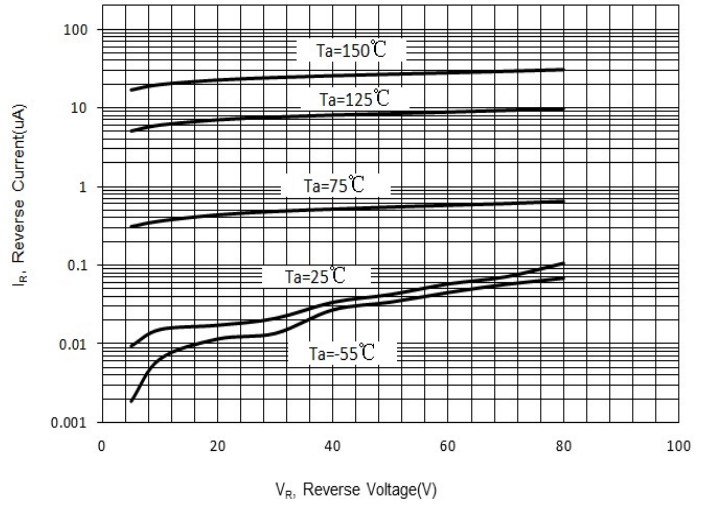


Fig 3. Junction Capacitance

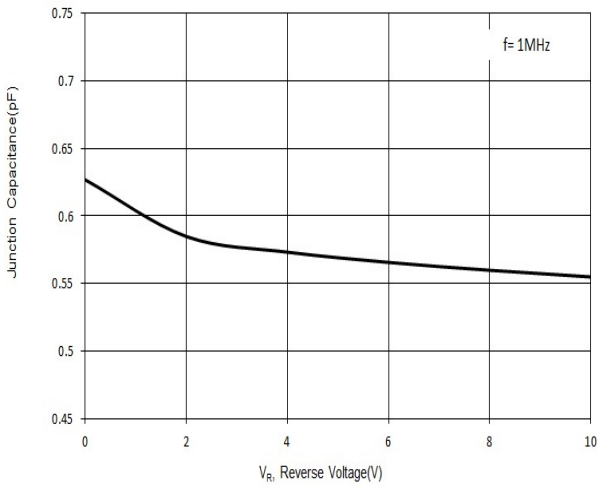


Fig 4. Power Derating Curves

