

# LL4148

## FEATURES :

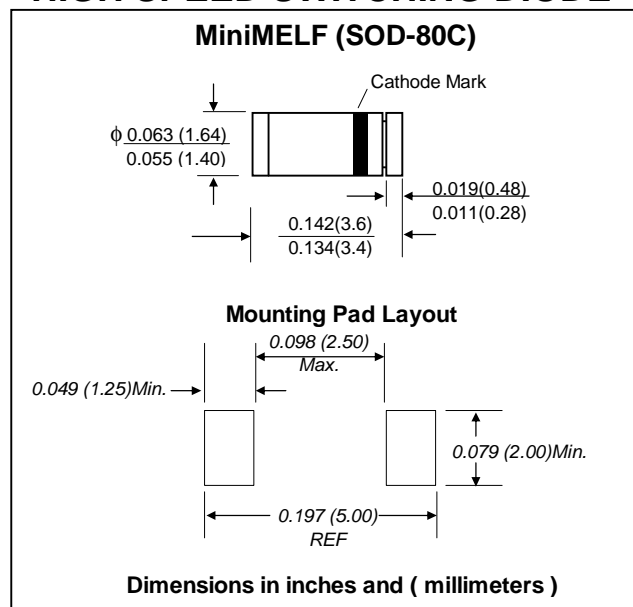
- \* Silicon Epitaxial Planar Diode
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* High speed switching
- \* Pb / RoHS Free

## MECHANICAL DATA :

**Case:** MiniMELF Glass Case (SOD-80)

**Weight:** approx. 0.05g

## HIGH SPEED SWITCHING DIODE



## Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Maximum Peak Reverse Voltage	$V_{RM}$	100	V
Maximum Reverse Voltage	$V_R$	75	V
Maximum Continuous Current <sup>(1)</sup>	$I_F$	200	mA
Maximum Average Forward Current Half Wave Rectification with Resistive Load, $f \geq 50\text{Hz}$ <sup>(1)</sup>	$I_{F(AV)}$	150	mA
Maximum Surge Forward Current at $t < 1\text{s}$ and $T_j = 25^\circ\text{C}$	$I_{FSM}$	500	mA
Maximum Power Dissipation <sup>(1)</sup>	$P_D$	500	mW
Thermal Resistance Junction to tie-point	$R\theta_{Jtp}$	300	$^\circ\text{C}/\text{W}$
Maximum Junction Temperature	$T_J$	175	$^\circ\text{C}$
Storage Temperature Range	$T_S$	-65 to + 175	$^\circ\text{C}$

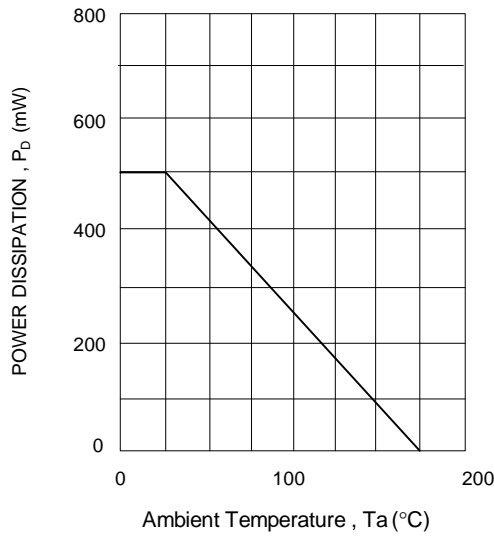
**Note:** (1) Valid provided that electrodes are kept at ambient temperature

## Electrical Characteristics ( $T_J = 25^\circ\text{C}$ unless otherwise noted)

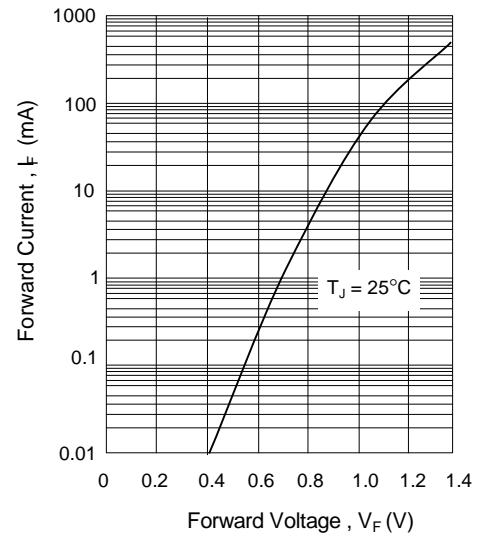
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Current	$I_R$	$V_R = 20\text{ V}$	-	-	25	nA
		$V_R = 75\text{ V}$	-	-	5	$\mu\text{A}$
		$V_R = 20\text{ V}$ , $T_j = 150^\circ\text{C}$	-	-	50	$\mu\text{A}$
Forward Voltage	$V_F$	$I_F = 10\text{ mA}$	-	-	1	V
Diode Capacitance	$C_d$	$f = 1\text{MHz}$ ; $V_R = 0$	-	-	4	pF
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	ns

## RATING AND CHARACTERISTIC CURVES ( LL4148 )

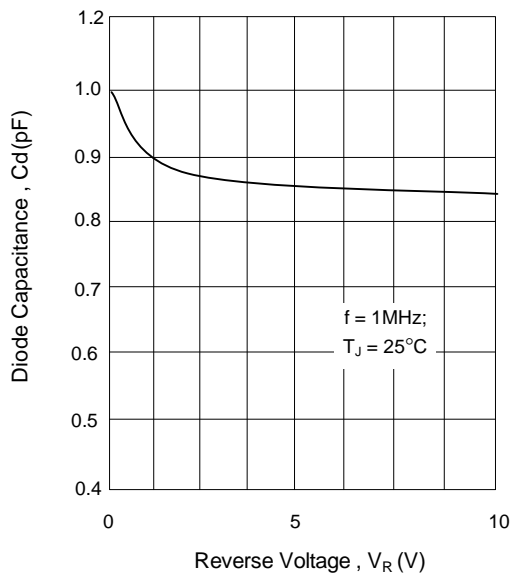
**FIG. 1 ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE**



**FIG. 2 TYPICAL FORWARD VOLTAGE**



**FIG. 3 TYPICAL DIODE CAPACITANCE AS A FUNCTION OF REVERSE VOLTAGE**



**FIG. 4 TYPICAL REVERSE CURRENT VERSUS JUNCTION TEMPERATURE**

