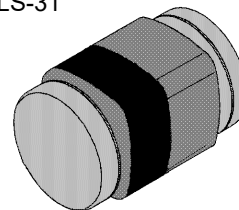


MCL4448

Silicon Epitaxial Planar Switching Diode

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

LS-31



Glass Case MicroMELF

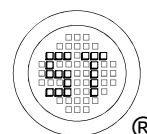
Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Forward Current	$I_{F(AV)}$	150	mA
Surge Forward Current at $t < 1\text{ s}$	I_{FSM}	500	mA
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 ¹⁾	$R_{\theta JA}$	300	$^{\circ}\text{C/W}$

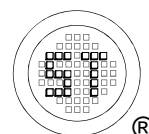
¹⁾ Valid provided that electrodes are kept at ambient temperature.



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

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 5\text{ mA}$ at $I_F = 100\text{ mA}$	V_F	0.62 -	0.72 1	V
Reverse 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 μA μA
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	100	-	V
Capacitance at $V_R = 0$, $f = 1\text{ MHz}$	C_{tot}	-	4	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$, $I_{rr} = 0.1 \times I_R$, $V_R = 6\text{ V}$, $R_L = 100\text{ }\Omega$	t_{rr}	-	4	ns



Electrical Characteristics Curves

Fig 1. Forward Characteristics

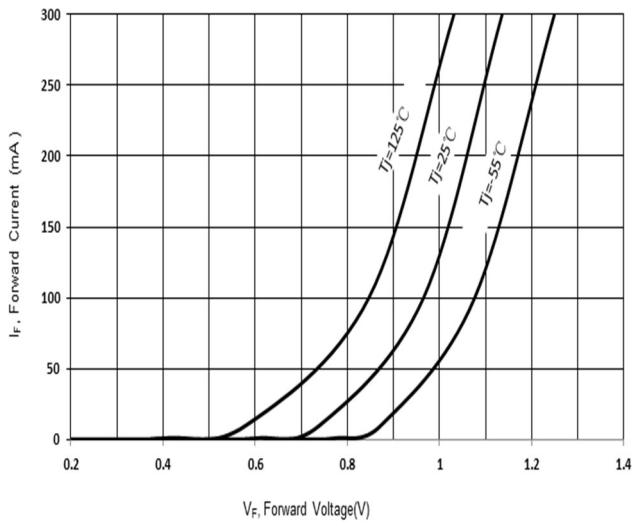


Fig 2. Reverse Characteristics

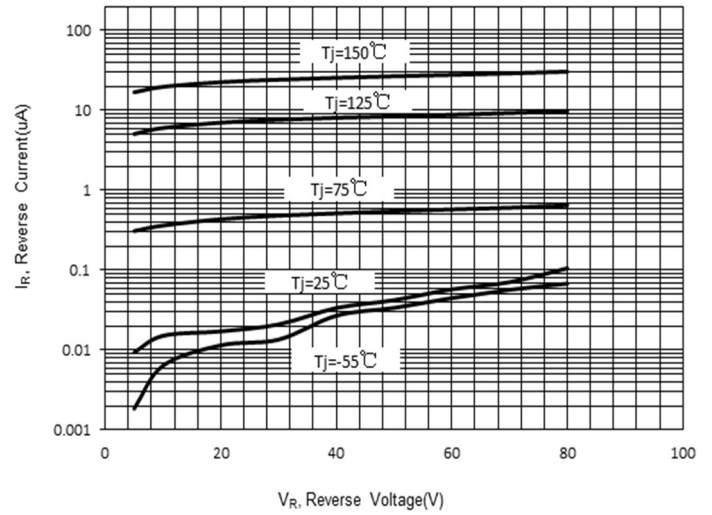


Fig 3. Junction Capacitance

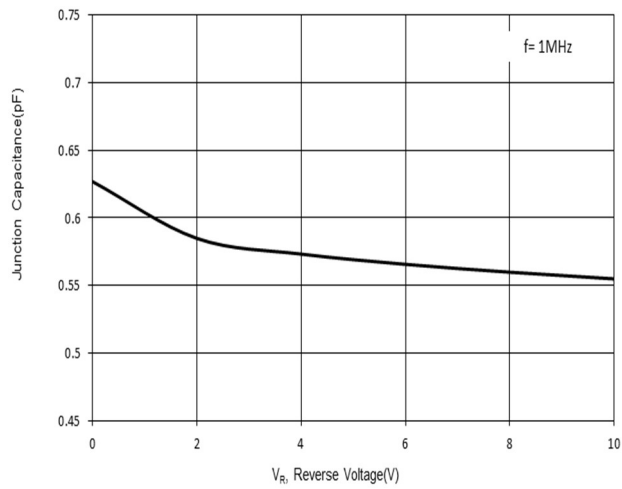
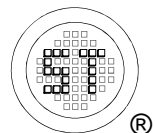
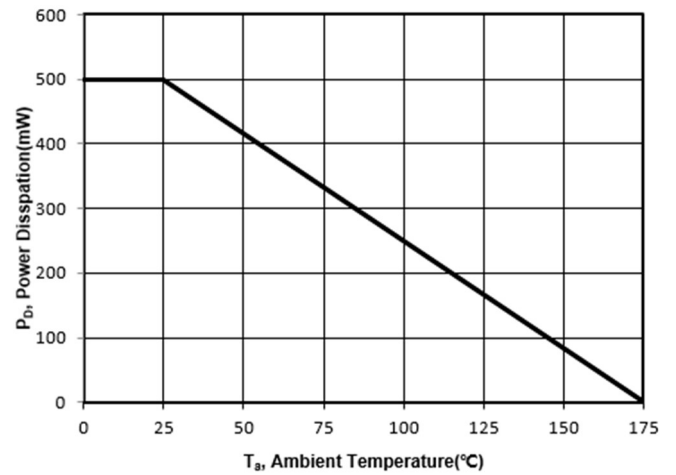


Fig 4. Power Derating Curves



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LS-31 Package Outline (Dimensions in millimeters)

