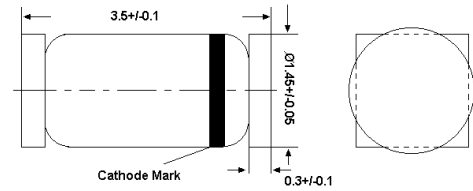


LS4148

Silicon Epitaxial Planar Switching Diode

Fast switching diode in QuadroMELF case
especially suited for automatic surface mounting.
Identical electrically to standard JEDEC 1N4148

LS-34

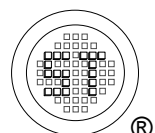


QuadroMELF
Dimensions in mm

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
Forward Current	I_F	300	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	0.5	A
at $t = 1\text{ s}$		1	
at $t = 1\text{ ms}$		4	
at $t = 1\text{ }\mu\text{s}$			
Power Dissipation	P_{tot}	500 ¹⁾	mW
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 175	$^\circ\text{C}$

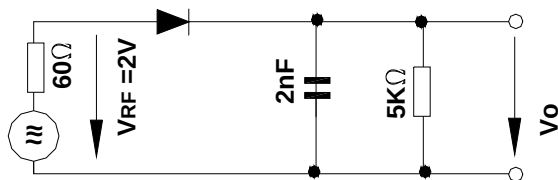
¹⁾ Valid provided that electrodes are kept at ambient temperature.



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

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage tested with 100 μA Pulses	$V_{(BR)R}$	100	-	V
Forward Voltage at $I_F = 10\text{ mA}$	V_F	-	1	V
Reverse Leakage Current at $V_R = 20\text{ V}$ at $V_R = 75\text{ V}$ at $V_R = 20\text{ V}$, $T_j = 150^\circ\text{C}$	I_R I_R I_R	- - -	25 5 50	nA μA μA
Capacitance at $V_R = 0$, $f = 1\text{ MHz}$	C_{tot}	-	4	pF
Voltage Rise when Switching ON tested with 50mA 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 $I_R = 1\text{ mA}$, $I_{rr} = 0.1 \times I_R$, $V_R = 6\text{ V}$, $R_L = 100\ \Omega$	t_{rr}	-	4	ns
Thermal Resistance Junction to Ambient Air	R_{thA}	-	0.35 ¹⁾	K/mW
Rectification Efficiency at $f = 100\text{ MHz}$, $V_{RF} = 2\text{ V}$	η_v	0.45	-	-

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



Rectification Efficiency Measurement Circuit

