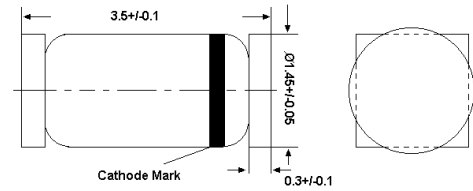


# LS4148

## 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

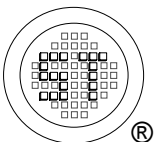


QuadroMELF  
 Dimensions in mm

### 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	at $t = 1\text{ s}$	0.5	A
	at $t = 1\text{ ms}$	1	
	at $t = 1\text{ }\mu\text{s}$	4	
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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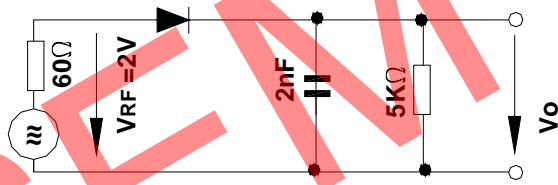


# LS4148

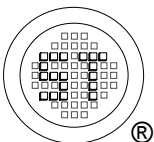
## Characteristics at $T_a = 25^\circ\text{C}$

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
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 $\mu\text{A}$ $\mu\text{A}$
Capacitance at $V_R = 0, f = 1 \text{ MHz}$	$C_{\text{tot}}$	-	4	pF
Voltage Rise when Switching ON tested with 50mA Forward Pulses $t_p = 0.1 \text{ s}$ , Rise Time < 30 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	$R_{\text{thA}}$	-	0.35 <sup>1)</sup>	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.

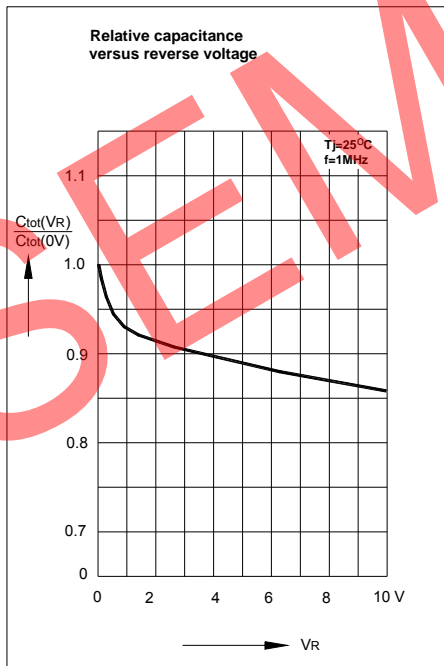
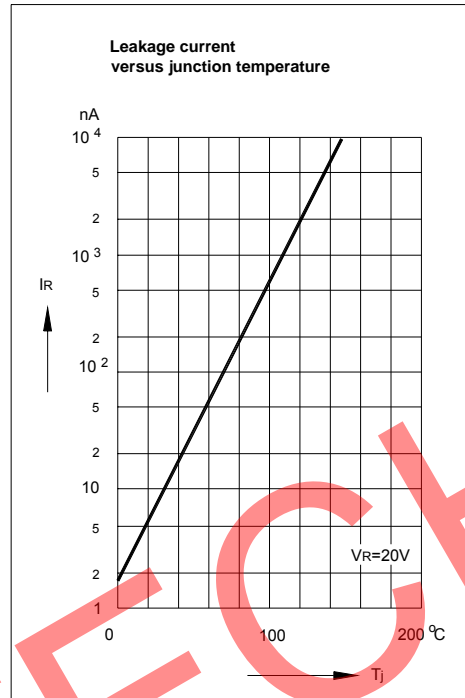
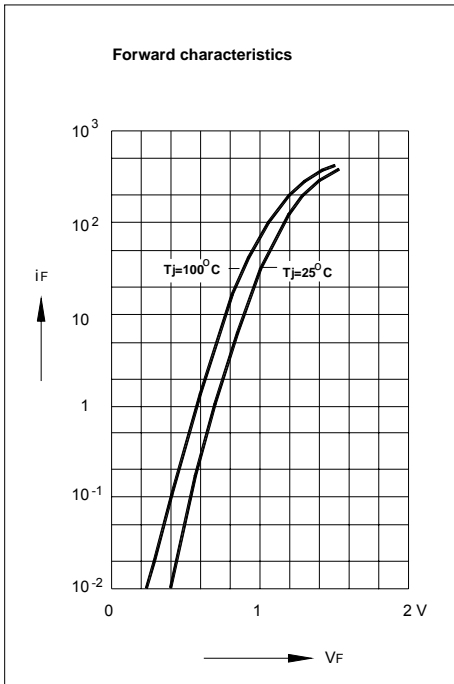


Rectification Efficiency Measurement Circuit

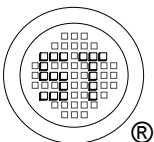


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