

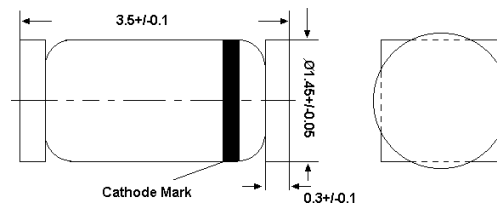
## LS4148

## Silicon Epitaxial Planar Switching Diode

## FEATURES

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

LS-34



QuadroMELF Dimensions in mm

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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 1 4	A
		at $t = 1$ s	
		at $t = 1$ ms	
		at $t = 1$ $\mu\text{s}$	
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	$^\circ\text{C}$

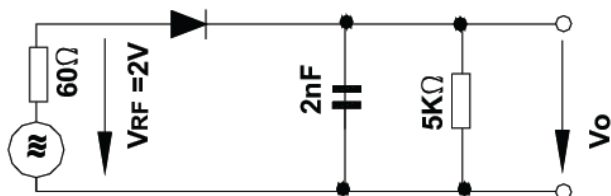
<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

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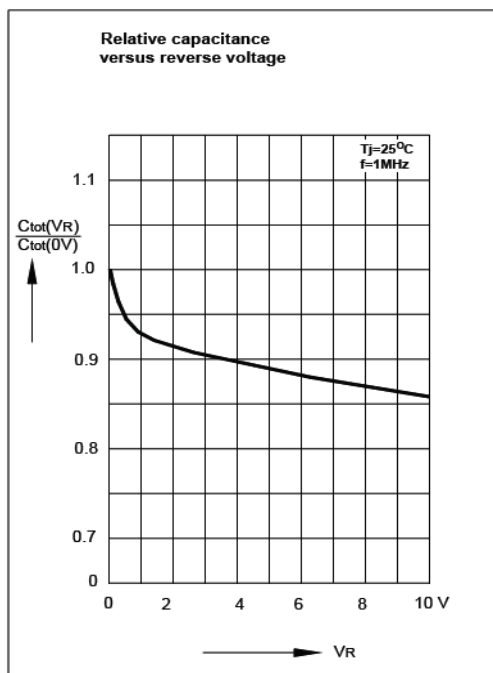
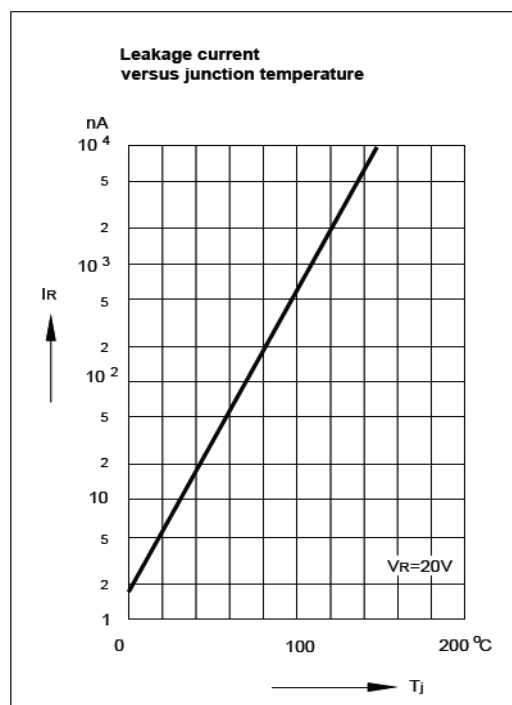
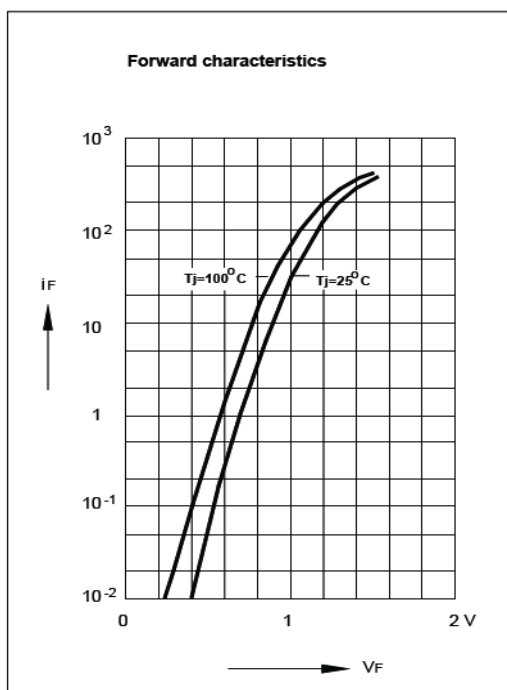
### Characteristics (Ta = 25°C)

PARAMETER	SYMBOL	Min.	Max.	UNIT
Reverse Breakdown Voltage tested with 100 $\mu$ A Pulses	$V_{(BR)R}$	100	-	V
Forward Voltage at $I_F = 10$ mA	$V_F$	-	1	V
Reverse Leakage Current at $V_R = 20$ V at $V_R = 75$ V at $V_R = 20$ V, $T_j = 150^\circ\text{C}$	$I_R$	- - -	25 5 50	nA $\mu$ A $\mu$ A
Capacitance at $V_R = 0$ , $f = 1$ MHz	$C_{tot}$	-	4	pF
Voltage Rise when Switching ON tested with 50mA Forward Pulses $t_p = 0.1$ s, Rise Time < 30 ns, $f_p = 5$ to 100 KHz	$V_{fr}$	-	2.5	V
Reverse Recovery Time at $I_F = 10$ mA to $I_R = 1$ mA, $I_{rr} = 0.1 \times I_R$ , $V_R = 6$ V, $R_L = 100 \Omega$	$t_{rr}$	-	4	ns
Thermal Resistance Junction to Ambient Air	$R_{thA}$	-	0.35 <sup>1)</sup>	K/mW
Rectification Efficiency at $f = 100$ MHz, $V_{RF} = 2$ 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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Note: Specification are subject to change without notice. For more detail and update, please visit our website.