

# Kingtronics®

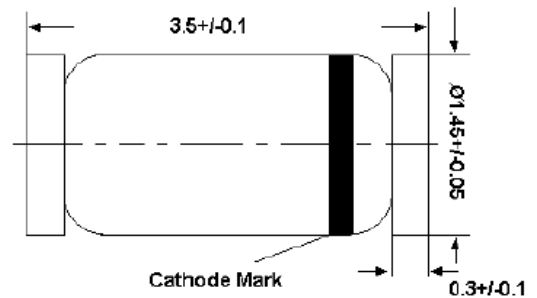
## LL4148

### Silicon Epitaxial Planar Switching Diode

## FEATURES

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

## LL-34



**Glass case MiniMELF  
Dimensions in mm**

## Absolute Maximum Ratings (Ta = 25°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
Non-repetitive Peak Forward Surge Current	at t = 1 s	0.5	
	at t = 1 ms	1	A
	at t = 1 $\mu$ s	4	
Power Dissipation	$P_{tot}$	500 <sup>1)</sup>	mW
Junction Temperature	$T_j$	175	°C
Storage Temperature Range	$T_{stg}$	- 65 to + 175	°C

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

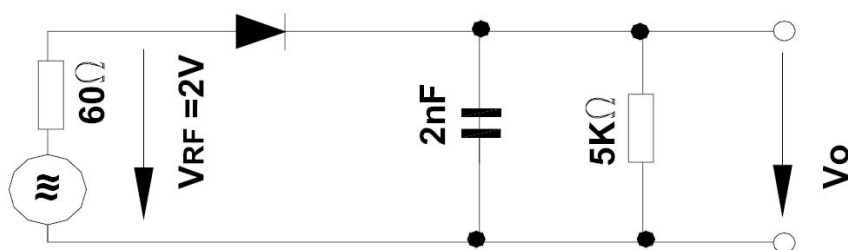
**Kingtronics® International Company**

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**Kingtronics**®**LL4148**Silicon Epitaxial Planar  
Switching Diode**Characteristics at Ta = 25°C**

PARAMETER	SYMBOL	MIN.	MAX.	UNIT
Forward Voltage at $I_F = 10 \text{ mA}$	$V_F$	-	1	V
Leakage Current				
at $V_R = 20 \text{ V}$	$I_R$	-	25	nA
at $V_R = 75 \text{ V}$	$I_R$	-	5	$\mu\text{A}$
at $V_R = 20 \text{ V}, T_j = 150^\circ\text{C}$	$I_R$	-	50	$\mu\text{A}$
Reverse Breakdown Voltage tested with $100 \mu\text{A}$ Pulses	$V_{(BR)R}$	100	-	V
Capacitance at $V_R = 0, f = 1 \text{ MHz}$	$C_{tot}$	-	4	pF
Voltage Rise when Switching ON				
tested with $50 \text{ mA}$ Forward Pulses	$V_{fr}$	-	2.5	V
$t_p = 0.1 \text{ s}$ , Rise Time $< 30 \text{ ns}$ , $f_p = 5 \text{ to } 100 \text{ KHz}$				
Reverse Recovery Time				
at $I_F = 10 \text{ mA}$ to $I_R = 1 \text{ mA}, V_R = 6 \text{ V}, R_L = 100 \Omega$	$t_{rr}$	-	4	ns
Thermal Resistance Junction to Ambient Air	$R_{thA}$	-	0.35 <sup>1)</sup>	K/mW
Rectification Efficiency at $f = 100 \text{ MHz}, V_{RF} = 2 \text{ V}$	$\eta_V$	0.45	-	-

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

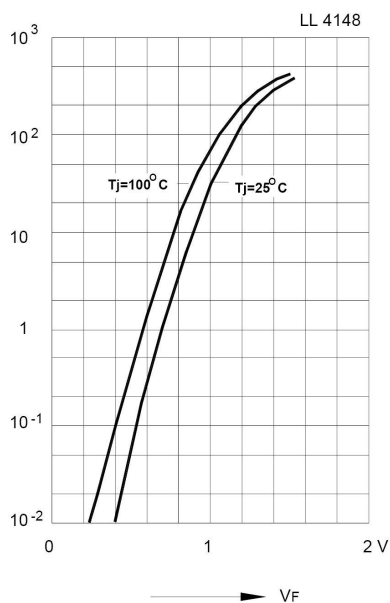
**Rectification Efficiency Measurement Circuit****Kingtronics**® International Company

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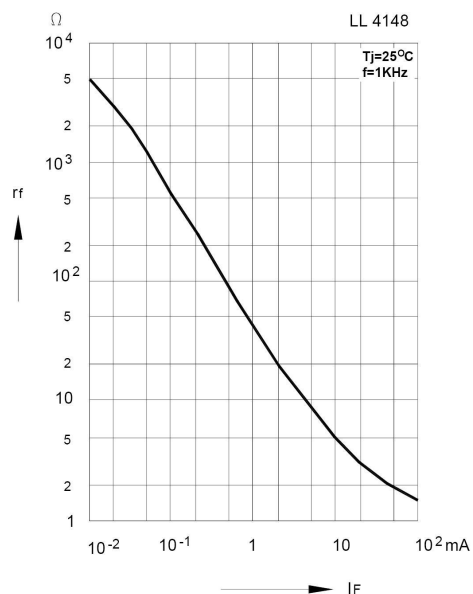
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### Silicon Epitaxial Planar Switching Diode

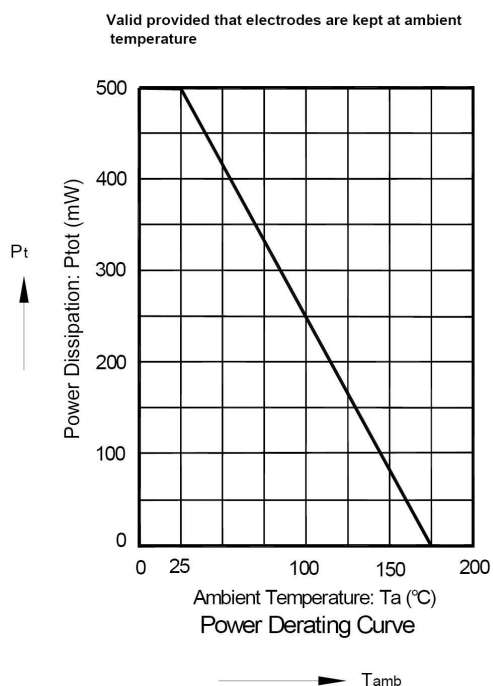
**Forward characteristics**



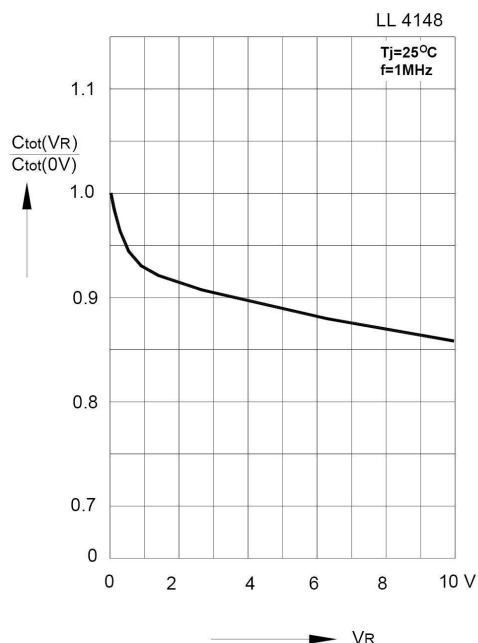
**Dynamic forward resistance versus forward current**



**Admissible power dissipation versus ambient temperature**



**Relative capacitance versus reverse voltage**



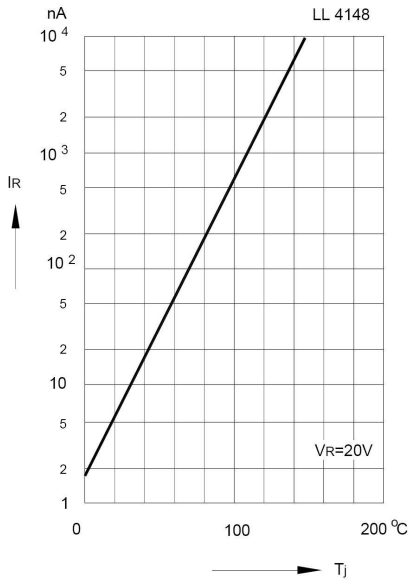
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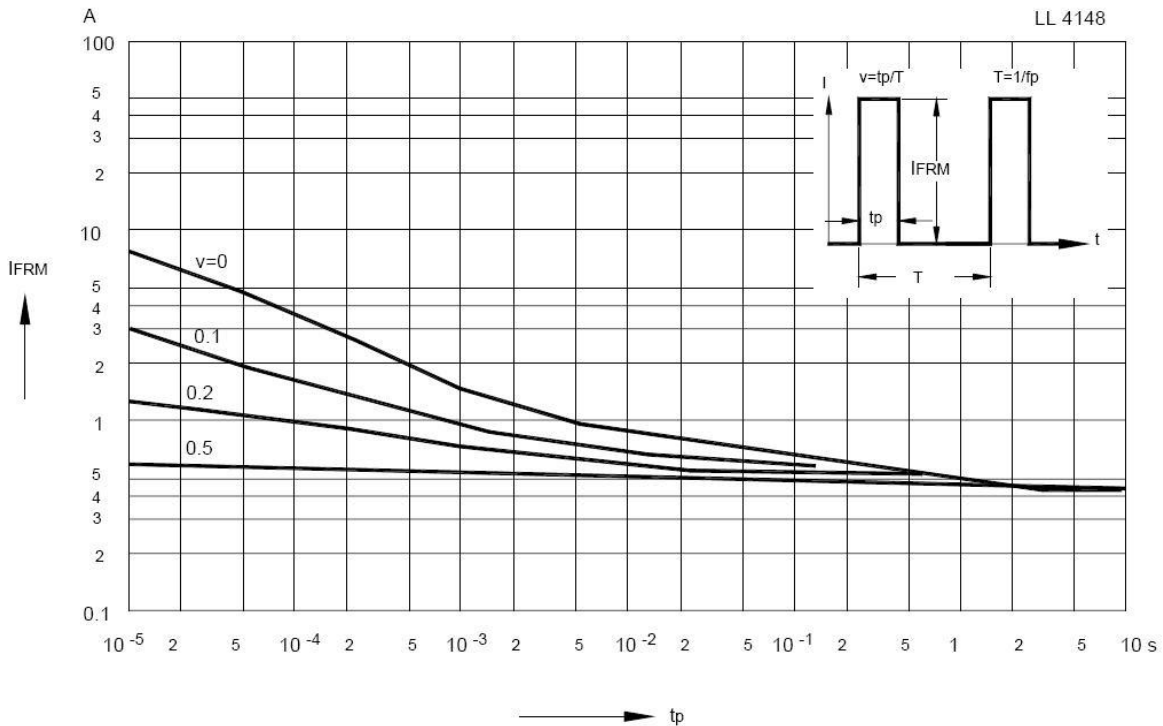
### Silicon Epitaxial Planar Switching Diode

#### Leakage current versus junction temperature



#### Admissible repetitive peak forward current versus pulse duration

Valid provided that electrodes are kept at ambient temperature



Note: Specifications are subject to change without notice.

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