

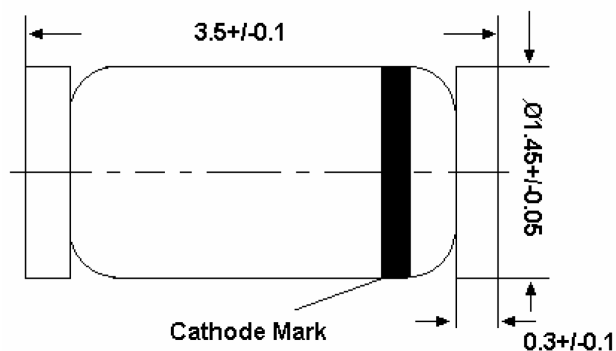
LL4148

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

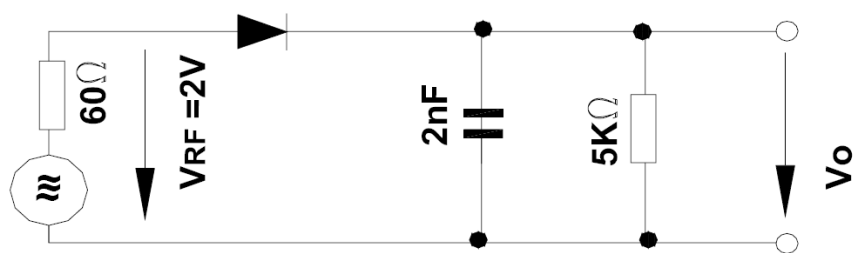
PARAMETER	SYMBOL	VALUE	UNIT
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	at $t = 1$ s	0.5
		at $t = 1$ ms	1
		at $t = 1$ μs	4
Power Dissipation	P_{tot}	500 ¹⁾	mW
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 175	$^\circ\text{C}$

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

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	μA
at $V_R = 20\text{ V}$, $T_j = 150^\circ\text{C}$	I_R	-	50	μA
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 mA 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 $I_R = 1\text{ mA}$, $V_R = 6\text{ V}$, $R_L = 100\ \Omega$	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	-	-

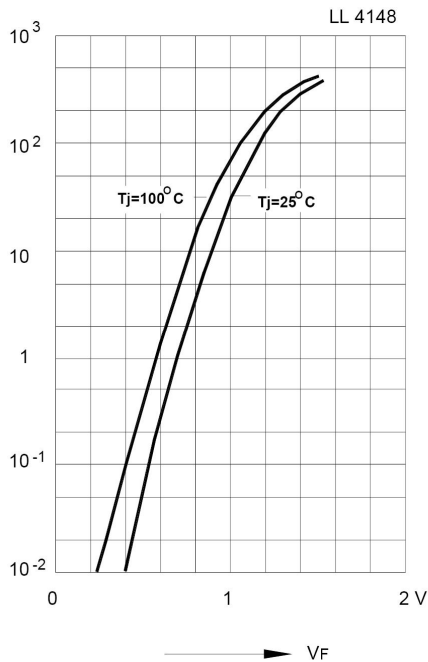
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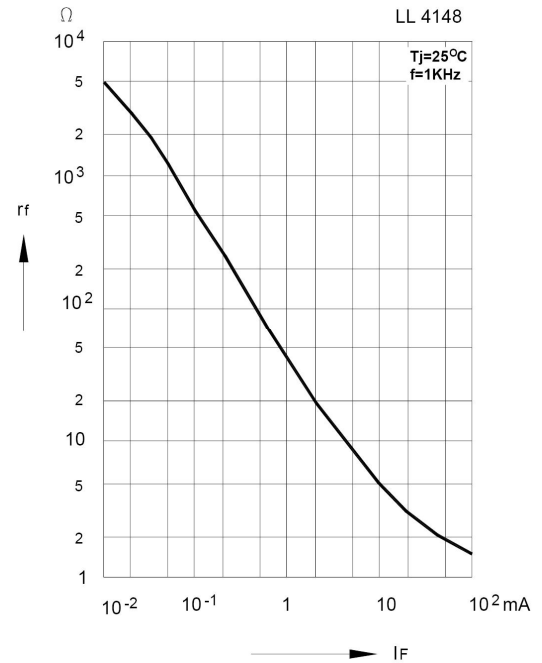
Rectification Efficiency Measurement Circuit

RATINGS AND CHARACTERISTIC CURVES LL4148

Forward characteristics

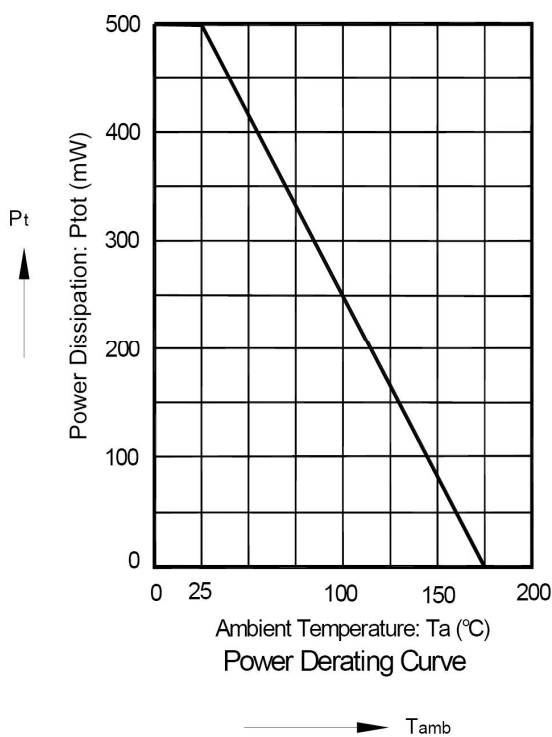


Dynamic forward resistance versus forward current

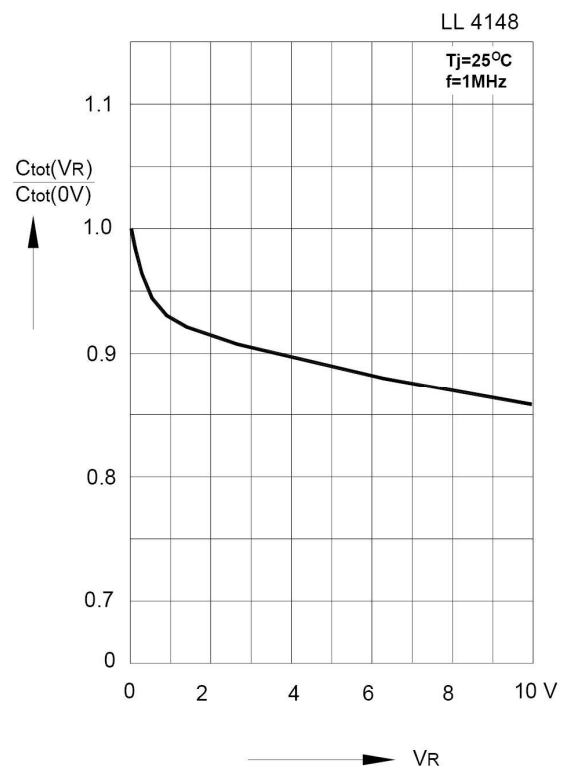


Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

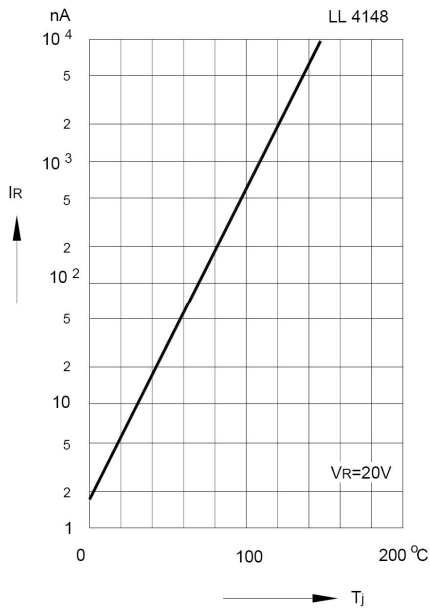


Relative capacitance versus reverse voltage



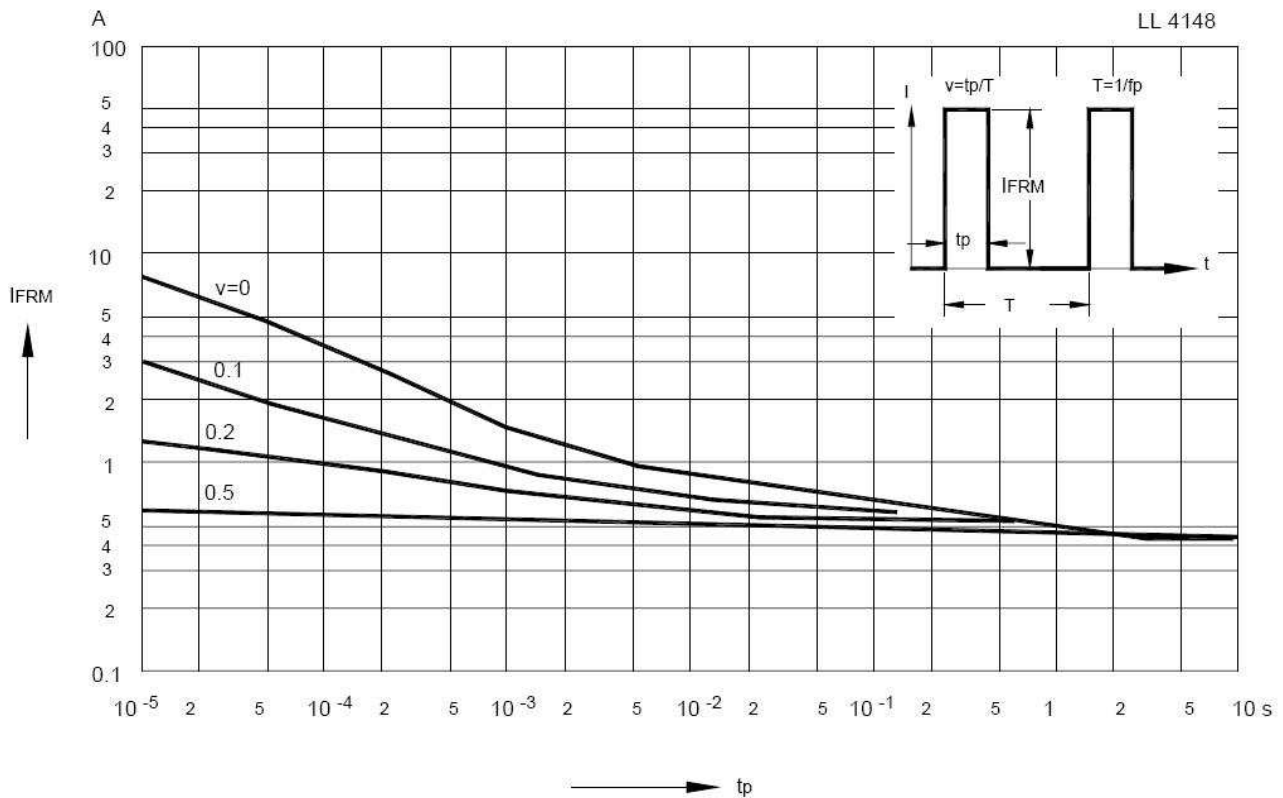
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Leakage current
versus junction temperature



Admissible repetitive peak forward current versus pulse duration

Valid provided that electrodes are kept at ambient temperature



Note: Specification are subject to change without notice. For more detail and update, please visit our website.