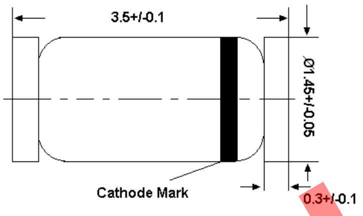
LL4148

Silicon Epitaxial Planar Switching Diode

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

LL-34



Glass case MiniMELF
Dimensions in mm

Absolute Maximum Ratings (T_a = 25℃)

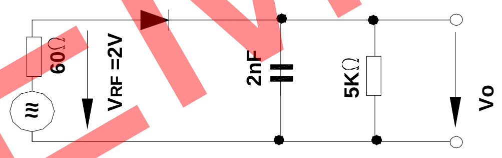
Parameter		Symbol	Value	Unit
Peak Reverse Voltage		V_{RM}	100	V
Reverse Voltage		V_R	75	V
Average Rectified Forward Current		$I_{F(AV)}$	200	mA
Non-repetitive Peak Forward Surge Current	at t = 1 s at t = 1 ms at t = 1 µs	I_{FSM}	0.5 1 4	A
Power Dissipation		P_{tot}	500 [1]	mW
Junction Temperature		T_j	175	℃
Storage Temperature Range		T_{stg}	- 65 to + 175	℃

[1] Valid provided that electrodes are kept at ambient temperature.

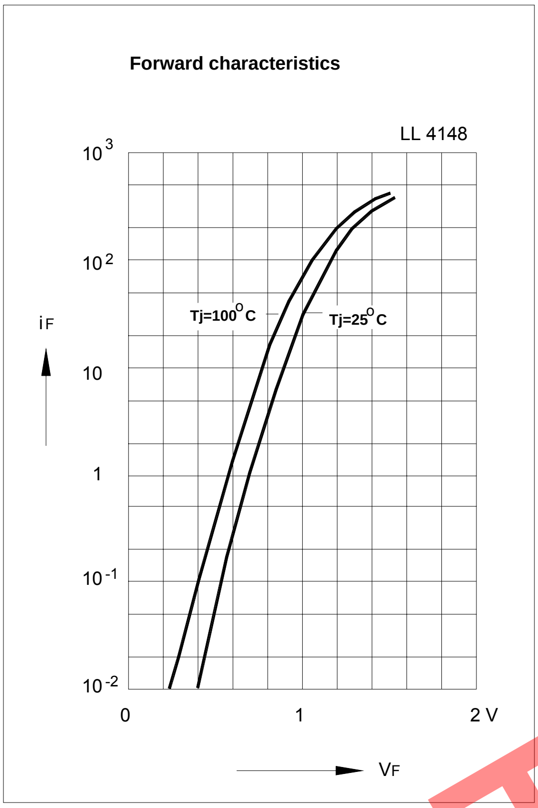
Characteristics at $T_a = 25℃$

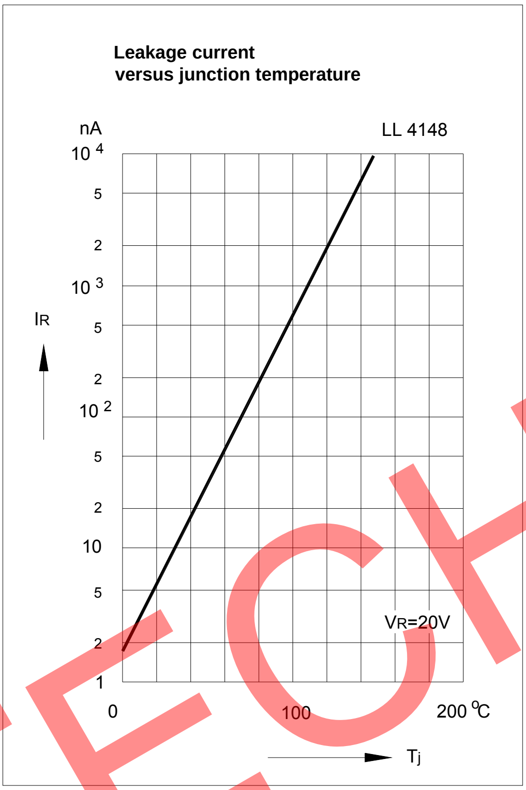
Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage tested with 100 µA Pulses	$V_{(BR)R}$	100	-	V
Forward Voltage at $I_F = 10$ mA	V_F	-	1	V
Leakage Current at $V_R = 20$ V at $V_R = 75$ V at $V_R = 20$ V, $T_j = 150℃$	 I_R I_R I_R	 - - -	 25 5 50	 nA µA µA
Capacitance at $V_R = 0$, f = 1 MHz	C_{tot}	-	4	pF
Voltage Rise when Switching ON tested with 50 mA Forward Pulses tp = 0.1 s, Rise Time < 30 ns, fp = 5 to 100 KHz	V_{fr}	-	2.5	V
Reverse Recovery Time at $I_F = 10$ mA to $I_R = 1$ mA, Irr = 0.1 x I_R ,$V_R = 6$ 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 MHz, $V_{RF} = 2$ V	η_V	0.45	-	-

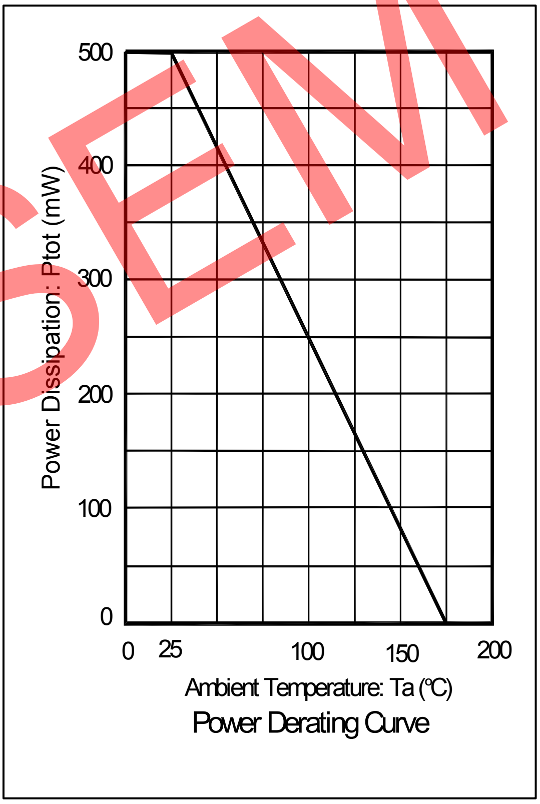
[1] Valid provided that electrodes are kept at ambient temperature.



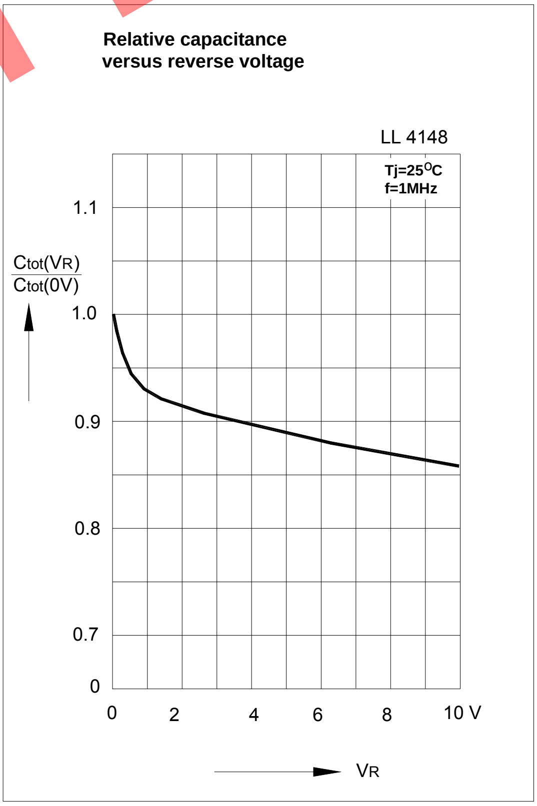
Rectification Efficiency Measurement Circuit


Forward characteristics


Leakage current
versus junction temperature



Power Derating Curve


Relative capacitance
versus reverse voltage