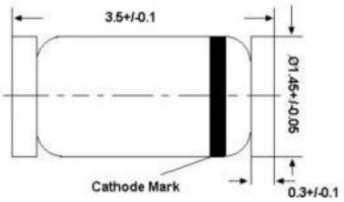
Silicon Epitaxial Planar Switching Diode

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

LL-34



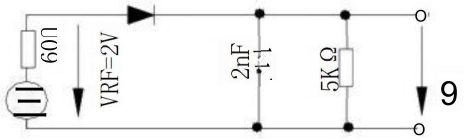
Glass case MiniMELF
Dimensions in mm

Absolute Maximum Ratings(Ta=25° ℃)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	VRM	100	V
Reverse Voltage	VR	75	V
Average Rectified Forward Current	1F(AV)	200	mA
Non-repetitive Peak Forward Surge Current at t=1s att=1ms att=1μs	1sM	0.5 1 4	A
Power Dissipation	Ptot	500①	mW
Junction Temperature	Tj	175	℃
Storage Temperature Range	Tstg	-65 to +175	℃
)Valid provided that electrodes are kept at ambient temperature.			

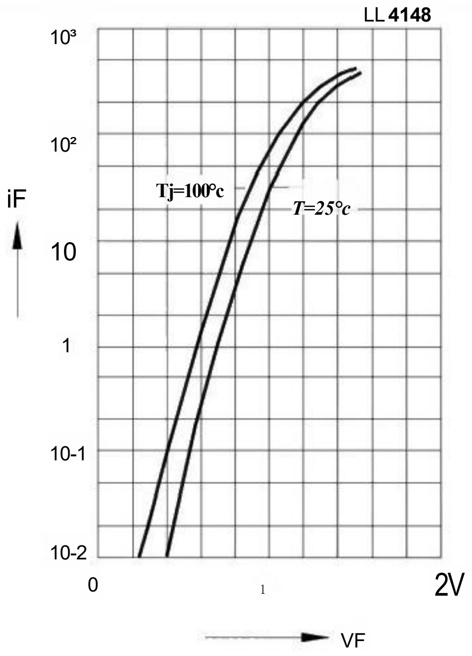
Characteristics at Ta=25℃

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at l==10 mA	VF	-	1	V
Leakage Current at VR=20V at VR=75V at VR=20V, Tj=150℃	lR lR IR	-	25 5 50	nA μA μA
Reverse Breakdown Voltage tested with 100 μA Pulses	VBR)R	100	–	V
Capacitance at VR=0, f=1 MHz	Ctot	-	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折		2.5	V
Reverse Recovery Time at l=10 mA to l=1 mA, VR=6V, RL=100 Ω	tm	-	4	ns
Thermal Resistance Junction to Ambient Air	RthA	-	0.351)	K/mW
Rectification Efficiency at f=100 MHz, VRF=2V	ηv	0.45		
″Valid provided that electrodes are kept at ambient temperature.				

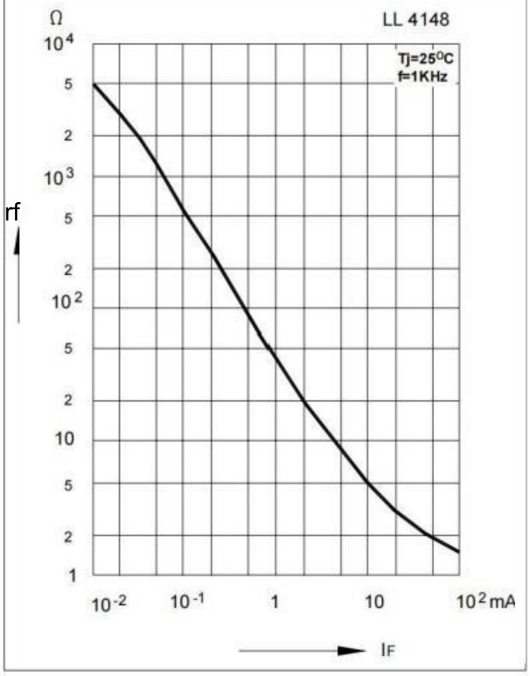


Rectification Efficiency Measurement Circuit

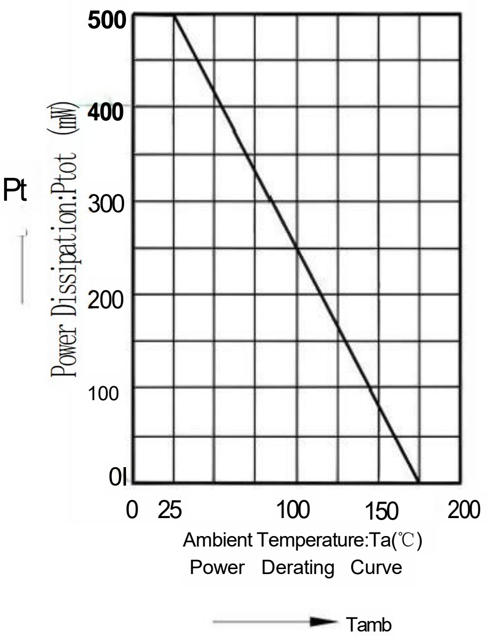
Forward characteristics



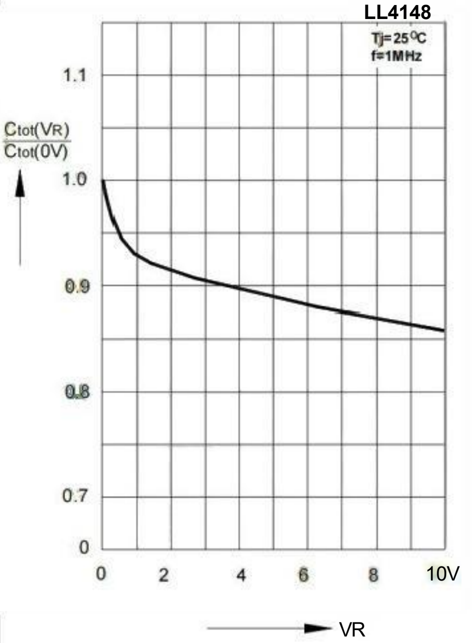
Dynamic forward resistance
versus forward current

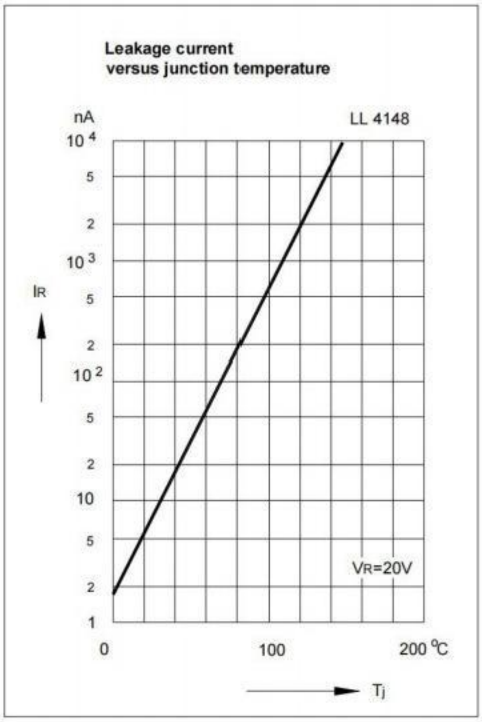


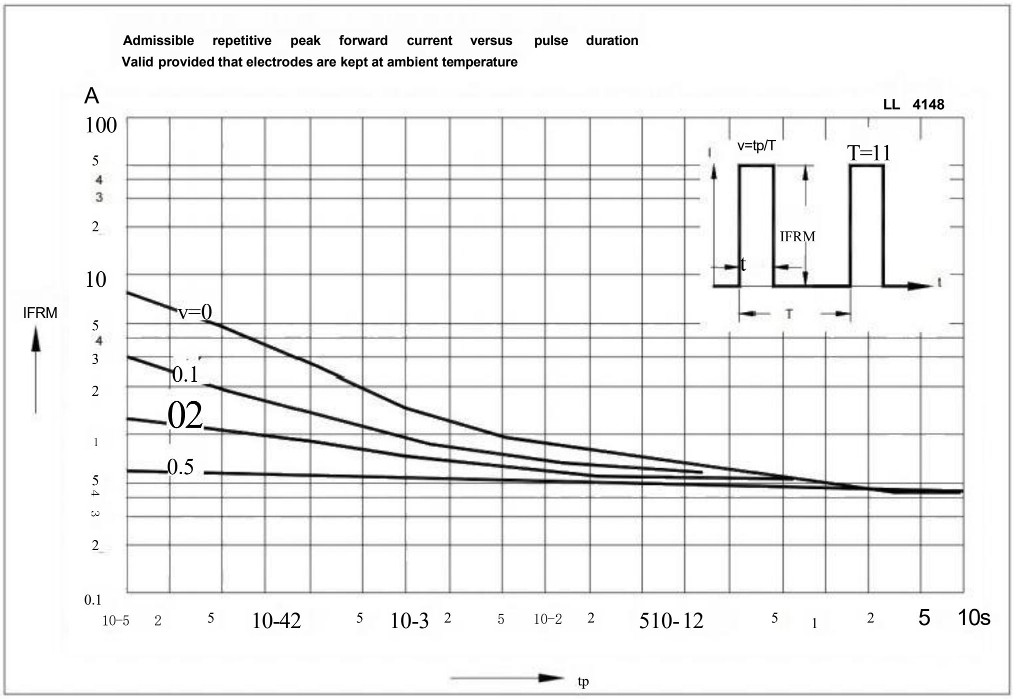
Admissible power dissipation
versus ambient temperature
Valid provided that eectrodes are kept at ambient temperature



Relative capacitance
versus reverse voltage




Leakage current
versus junction temperature
nA
10 4
5
2
10 3
5
2
10 2
5
2
10
5
2
1
IR
LL 4148
VR=20V
0
100
200 °C
Tj


Admissible repetitive peak forward current versus pulse duration
Valid provided that electrodes are kept at ambient temperature
A
100
5
4
3
2
10
5
4
3
2
1
5
4
3
2
0.1
IFRM
LL 4148
v=0
0.1
02
0.5
v=tp/T
T=11
IFRM
t
T
t
10−5
2
5
10-42
5
10-3
2
5
10−2
2
510-12
5
1
2
5
10s
tp