

Surface Mount Switching Diodes

(Pb) Lead(Pb)-Free

Features:

- *Silicon Epitaxial Planar Diode
- *Fast Switching Diodes
- *500 mW Power Dissipation

Mechanical Data:

- *Case : MINI-MELF Glass Case (SOD-80)
- *Weight : Approx 0.05 gram

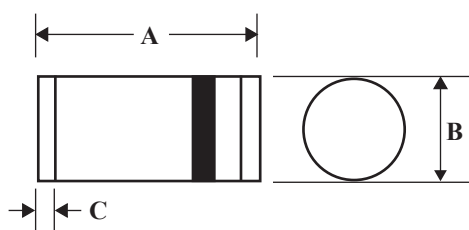
**SMALL SIGNAL
SWITCHING DIODES
150 m AMPERES
100 VOLTS**



MINI-MELF

MINI-MELF Outline Dimensions

Unit:mm



MINI MELF		
Dim	Min	Max
A	3.30	3.70
B	1.30	1.60
C	0.28	0.50

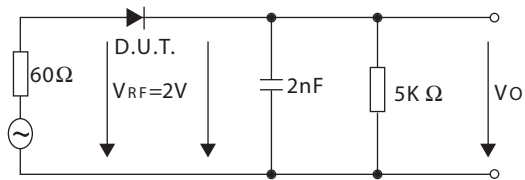
Maximum Ratings ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	LL4148/LL4448	Unit
Non-Repetitive Peak Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{PWM} V_{RWM} V_R	75	V
Average Rectified Output Current ⁽¹⁾	I_O	150	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu\text{s}$	I_{FSM}	2.0	A
Power Dissipation	P_d	500	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	300	K/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175	$^{\circ}\text{C}$

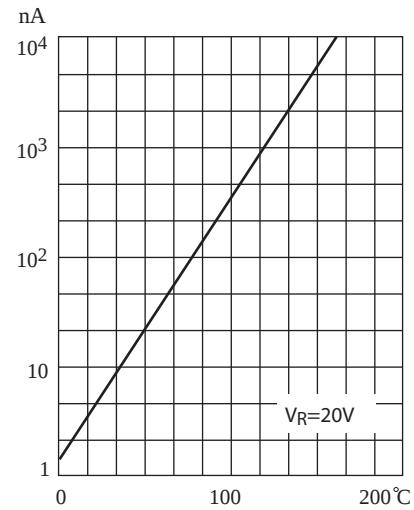
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage $I_R=100\mu\text{A}$	$V_{(BR)R}$	100	-	V
Forward Voltage LL4148 $I_F=10\text{ mA}$ LL4448 $I_F=5\text{ mA}$ $I_F=100\text{ mA}$	V_F	0.62	1.0 0.72 1.0	V
Leakage Current $V_R=20\text{V}$ $V_R=75\text{V}$ $V_R=75\text{V}, T_J=150^{\circ}\text{C}$	I_R	- - -	25 5 50	μA
Junction Capacitance	C_j	-	4	PF
Reverse Recovery Time $I_F=10\text{ mA}, I_R=1\text{ mA}, V_R=6\text{V}, R_L=100\Omega$	T_{rr}	-	4	nS

Note: 1.Valid Provided that device Terminals are Kept at Ambient Temperature.



**RECTIFICATION EFFICIENCY
MEASUREMENT CIRCUIT**



**FIG 1, LEAKAGE CURRENT VERSUS
JUNCTION TEMPERATURE**

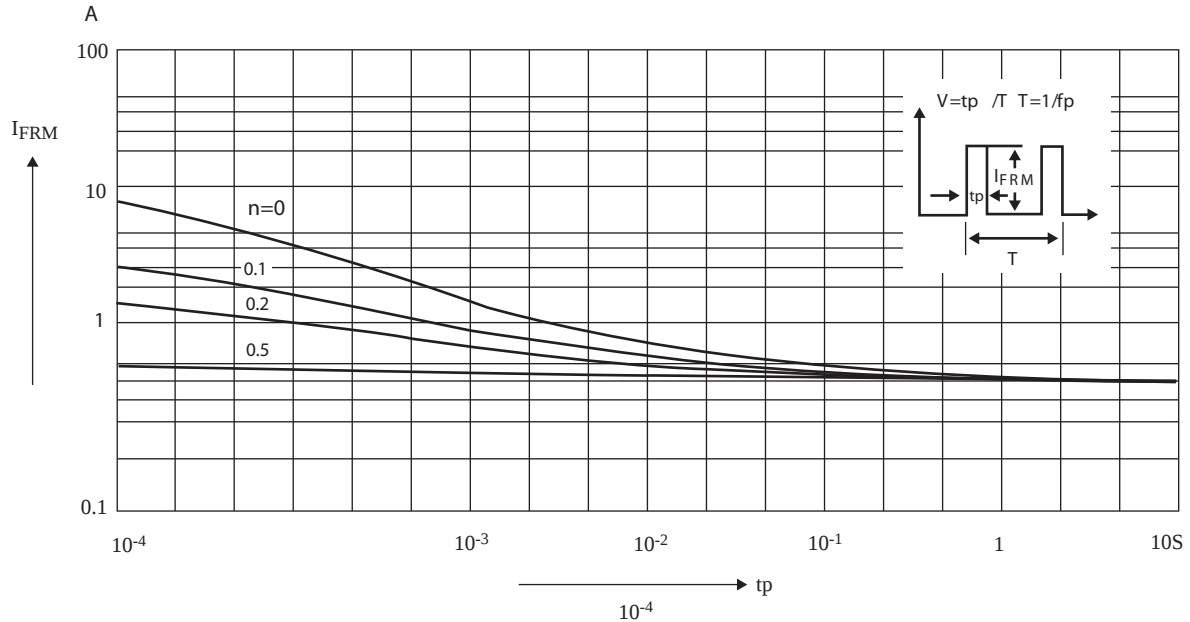


FIG 2, ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

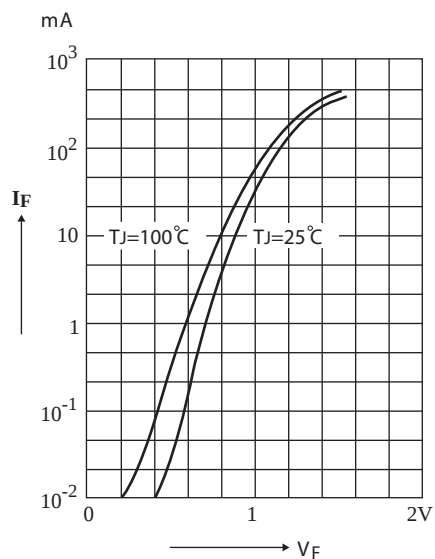
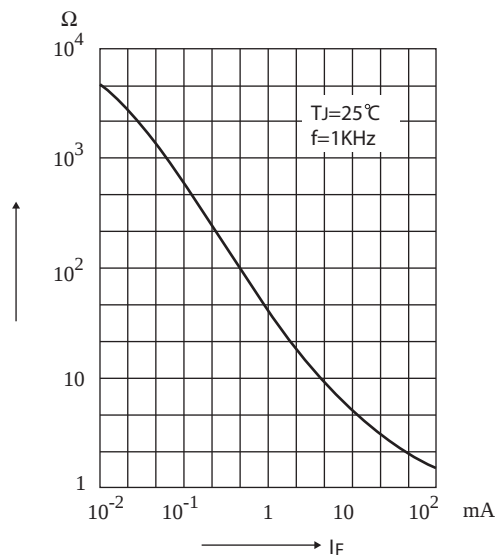
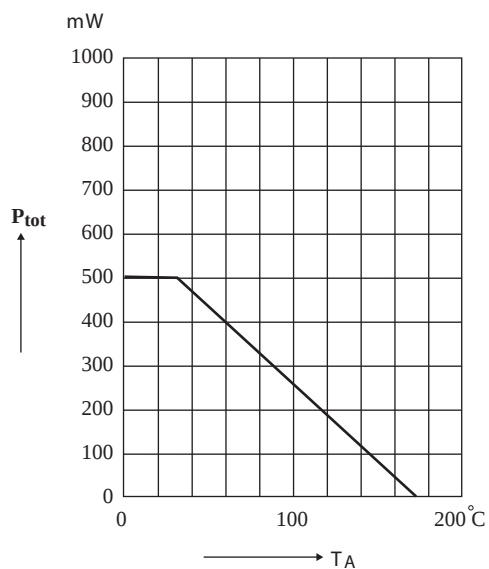
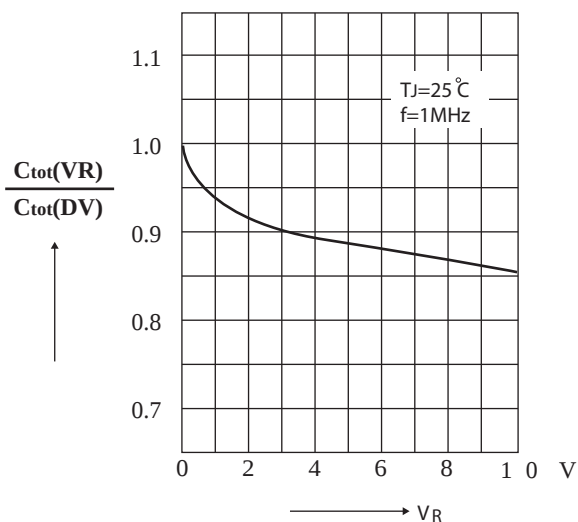


FIG 3, FORWARD CHARACTERISTICS

FIG 4, DYNAMIC FORWARD RESISTANCE
VERSUS FORWARD CURRENTFIG 5, ADMISSIBLE POWER DISSIPATION
VERSUS AMBIENT TEMPERATUREFIG 6, RELATIVE CAPACITANCE VERSUS
VOLTAGE