



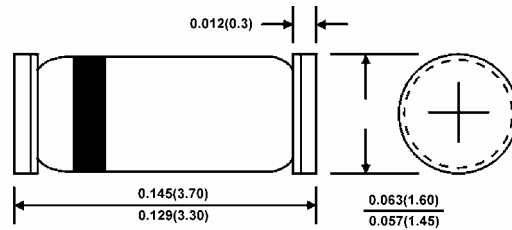
LL4148L

500mW Hermetically Sealed
Glass Fast Switching Diodes

SOD80C

Features

- ✧ Small hermetically sealed glass SMD package
- ✧ High switching speed: max. 4 ns
- ✧ Continuous reverse voltage:
Max. 75V
- ✧ Repetitive peak reverse voltage:
Max. 100V
- ✧ Repetitive peak forward current:
Max. 450mA



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Continuous Reverse Voltage	V_R	75	V
Continuous Forward Current Fig. 2, (Note 1)	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	450	mA
Non-Repetitive Peak Forward Current Square wave: $T_J=25^\circ\text{C}$ Prior to surge: see Fig. 4 $t=1\mu\text{s}$ $t=1\text{ms}$ $t=1\text{s}$	I_{FSM}	4 1 0.5	A
Total Power Dissipation $T_{amb}=25^\circ\text{C}$, (Note 1)	P_{tot}	500	mW
Operating Junction Temperature	T_J	200	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to + 200	$^\circ\text{C}$

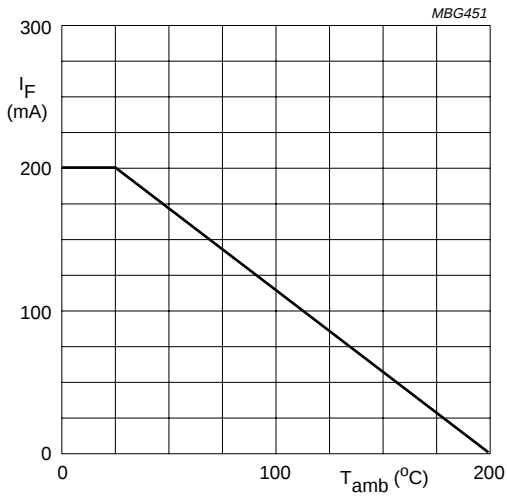
Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Forward Voltage See Fig. 3 $I_F=5.0\text{mA}$ $I_F=10\text{mA}$ $I_F=100\text{mA}$	V_F	0.62 — —	0.72 1.0 1.0	V
Reverse Leakage Current $V_R=20\text{V}$ see Fig. 5 $V_R=20\text{V } T_J=150^\circ\text{C}$ $V_R=20\text{V } T_J=100^\circ\text{C}$	I_R	— — —	25 50 3	nA uA uA
Junction Capacitance $V_R=0$, $f=1.0\text{MHz}$	C_j	—	4.0	pF
Reverse Recovery Time (Note 2)	t_{rr}	—	4.0	nS
Forward Recovery Voltage $I_F=50\text{mA}$, $t_r=20\text{ns}$	V_{fr}	—	2.5	V

Notes: 1. Device Mounted on an FR4 printed-circuit board.

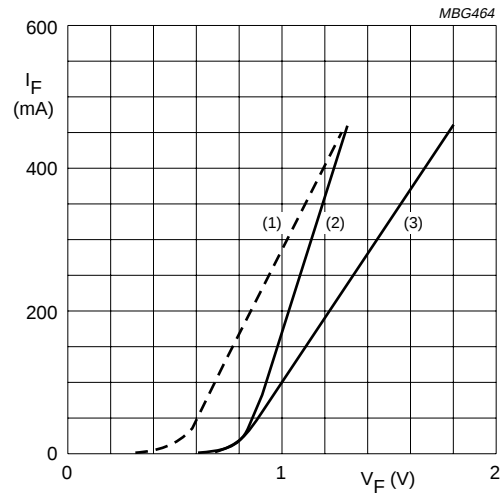
2. Reverse Recovery Test Conditions: $I_F=10\text{mA}$, $I_R=60\text{mA}$, $R_L=100\Omega$, $I_{RR}=1\text{mA}$

RATINGS AND CHARACTERISTIC CURVES (LL4148L)



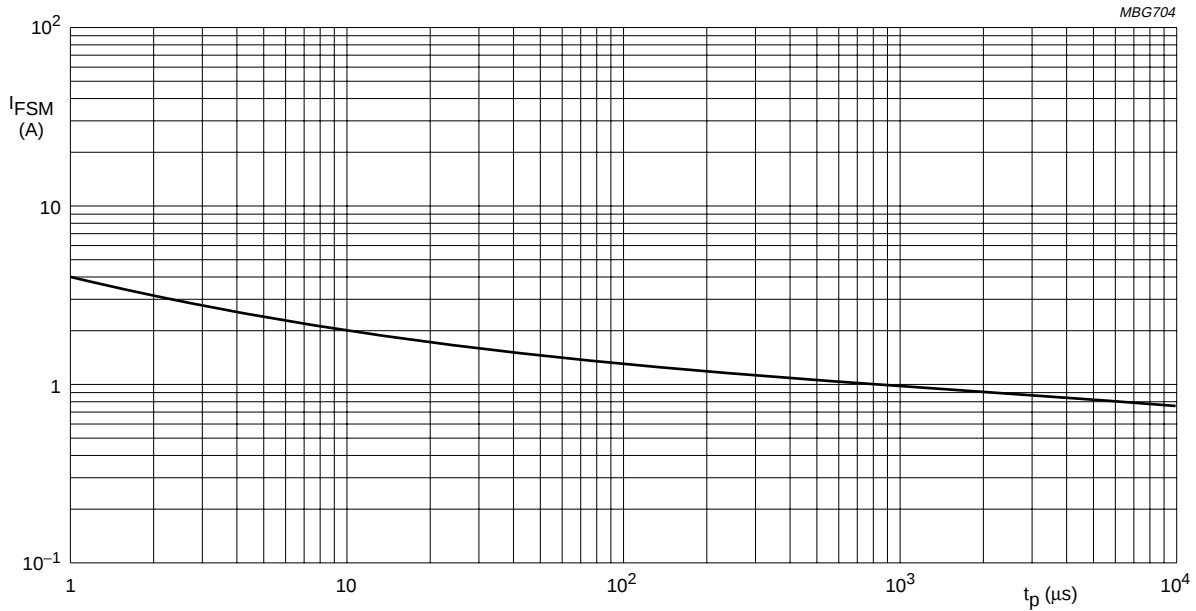
Device mounted on an FR4 printed-circuit board.

Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



- (1) $T_j = 175^{\circ}$ C; typical values.
- (2) $T_j = 25^{\circ}$ C; typical values.
- (3) $T_j = 25^{\circ}$ C; maximum values.

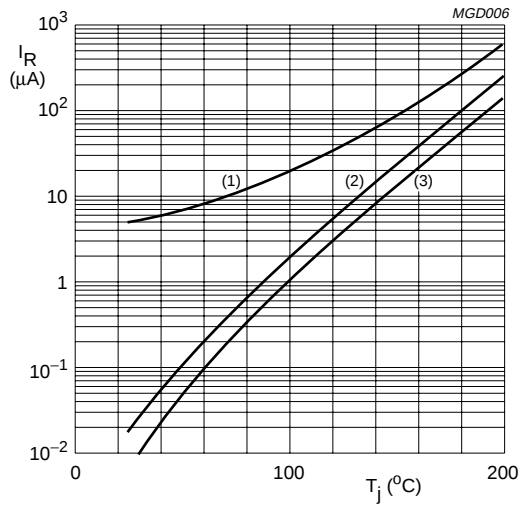
Fig.3 Forward current as a function of forward voltage.



Based on square wave currents.
 $T_j = 25^{\circ}$ C prior to surge.

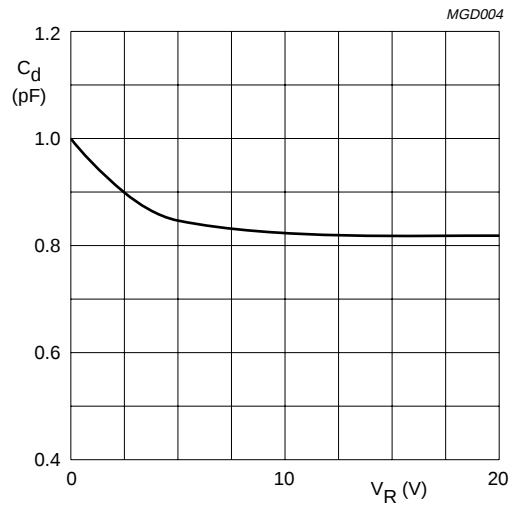
Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

RATINGS AND CHARACTERISTIC CURVES (LL4148L)



- (1) $V_R = 75\text{ V}$; maximum values.
- (2) $V_R = 75\text{ V}$; typical values.
- (3) $V_R = 20\text{ V}$; typical values.

Fig.5 Reverse current as a function of junction temperature.



$f = 1\text{ MHz}$; $T_j = 25\text{ }^{\circ}\text{C}$.

Fig.6 Diode capacitance as a function of reverse voltage; typical values.