

Small Signal Product

500mW Hermetically Sealed Glass Fast Switching Diodes

FEATURES

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


SOD80C

MECHANICAL DATA

- Polarity: Indicated by black cathode band

Hermetically Sealed Glass

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)				
PARAMETER	SYMBOL	VALUE	UNIT	
Repetitive Peak Reverse Voltage	V _{RRM}	75	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 Surge Current	I _{FSM}	4	A	
Square Wave : T _J =25°C Prior to Surge : See Fig. 4 t=1μs				1
t=1ms				0.5
t=1s				
Total Power Dissipation T _{amb} =25°C, (Note 1)	P _{tot}	500	mW	
Operating Junction Temperature	T _J	200	°C	
Storage Temperature Range	T _{STG}	-65 to 200	°C	

PARAMETER	SYMBOL	MIN	MAX	UNIT
Forward Voltage See Fig. 3 I _F =10mA	V _F	-	1.0	V
Reverse Leakage Current V _R =20V See Fig. 5	I _R	-	25.0	nA
V _R =20V T _J =150°C		-	50.0	μA
Junction Capacitance V _R =0 f=1.0MHz	C _J	-	4.0	pF
Reverse Recovery Time (Note 2)	t _{rr}	-	4.0	ns
Forward Recovery Voltage I _F =50 mA tr=20ns	V _{fr}	-	2.5	V

Note 1 : Device mounted on an FR4 printed-circuit board

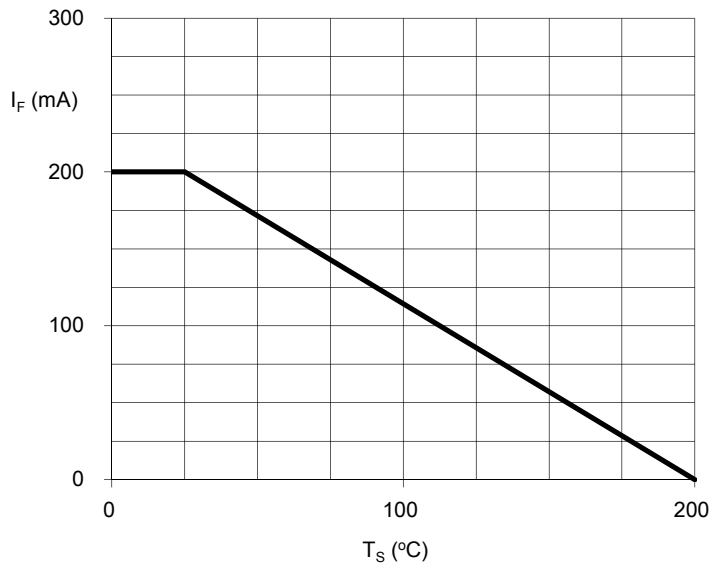
 Note 2 : Reverse recovery test conditions : I_F=10mA, I_R=60mA, R_L=100Ω, I_{RR}=1m A

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RATINGS AND CHARACTERISTICS CURVES

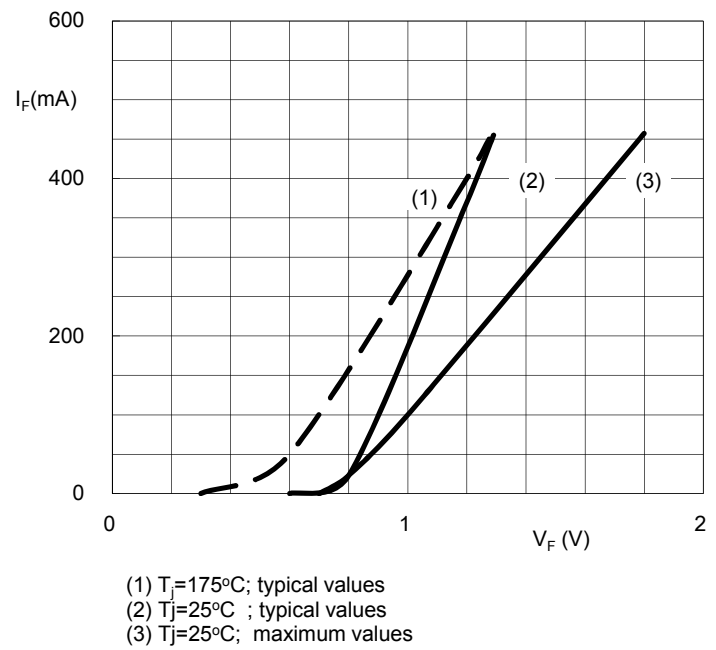
($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig. 1 Maximum Permissible Continuous Forward Current As A Function of Ambient Temperature



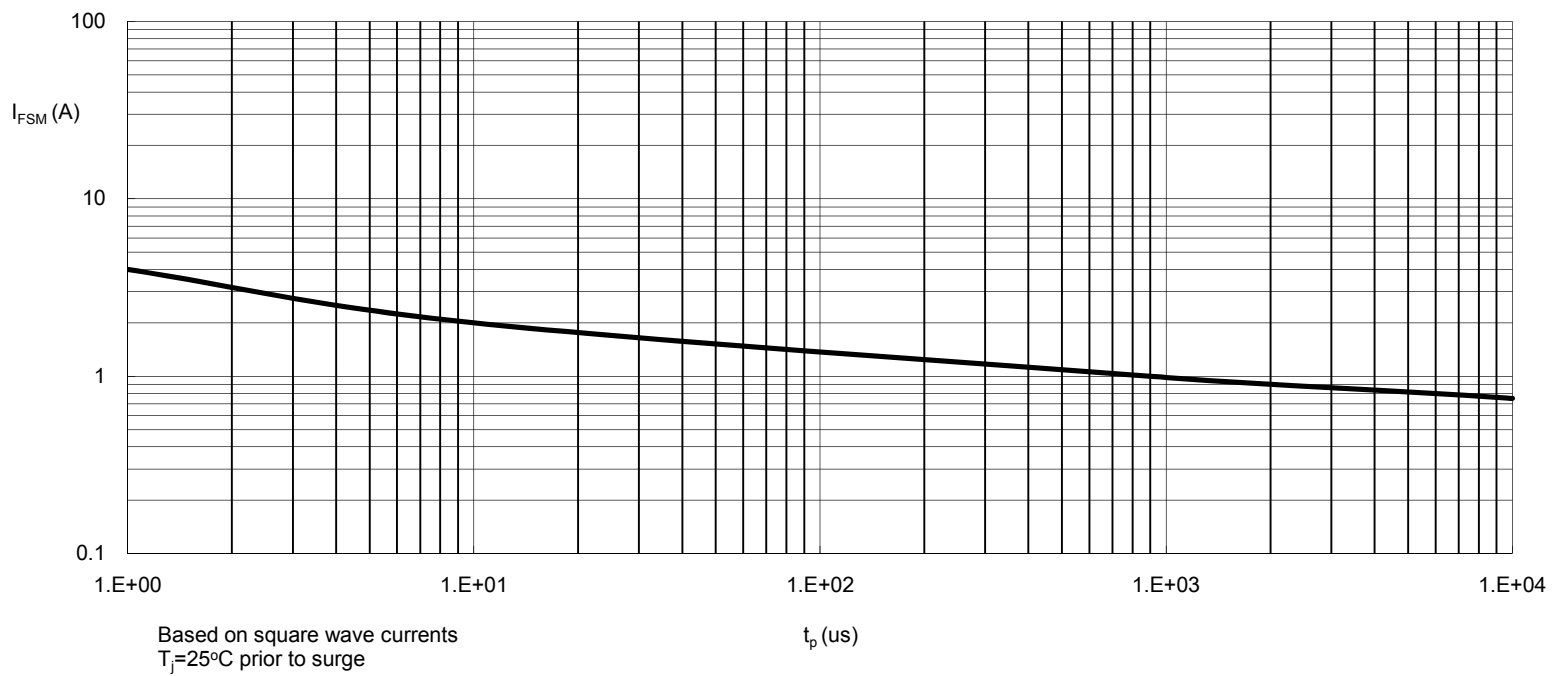
Device mounted on an FR4 printed-circuit

Fig. 2 Forward Current As A Function of Forward Voltage



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

Fig. 3 Maximum Permissible Non-Repetitive Peak Forward Current As A Function of Pulse Duration



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

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Fig. 4 Reverse Current As A Function of Junction Temperature

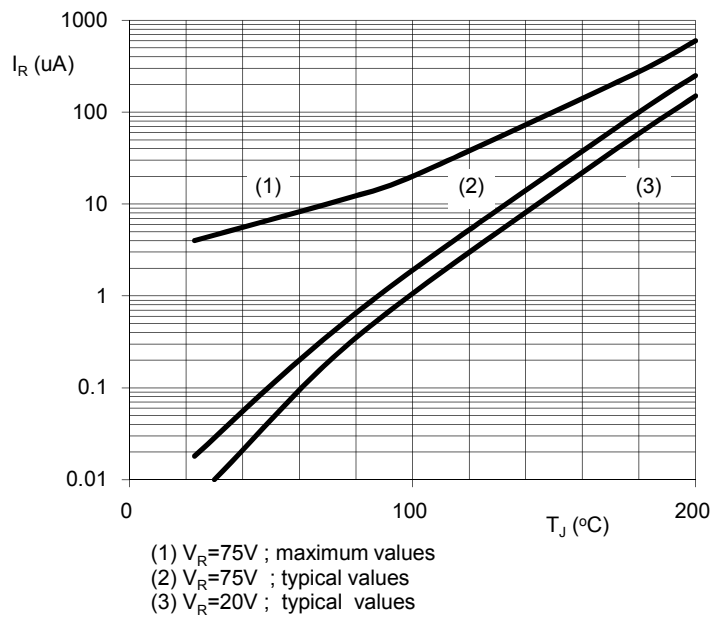
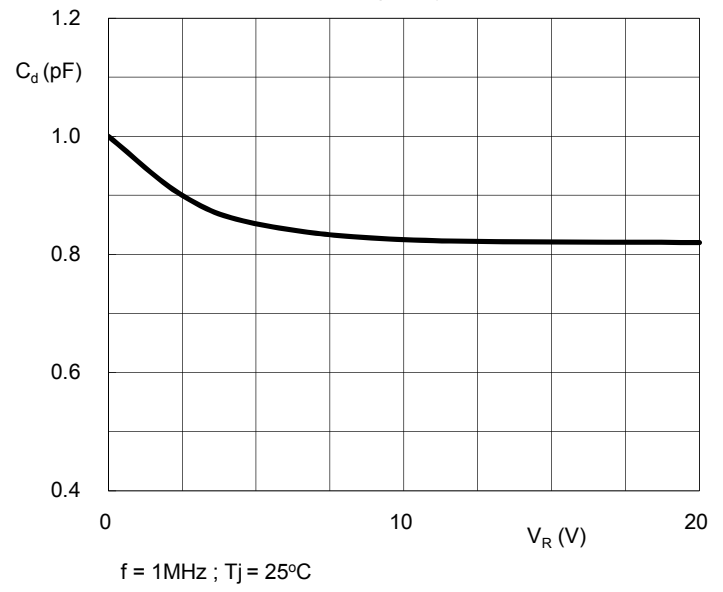


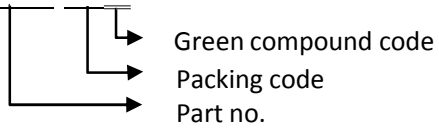
Fig. 5 Diode Capacitance As A Function of Reverse Voltage ; Typical Values



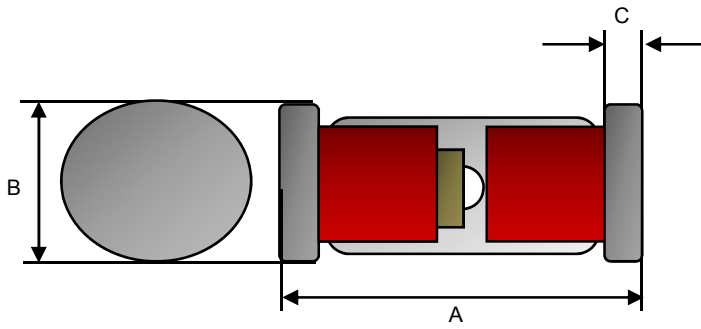
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ORDER INFORMATION (EXAMPLE)

LL4148L LOG

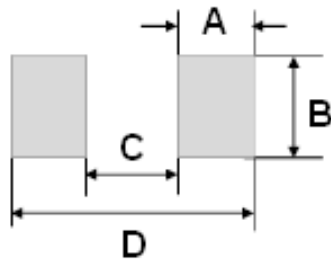


PACKAGE OUTLINE DIMENSION



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	3.30	3.70	0.130	0.146
B	1.40	1.60	0.055	0.063
C	0.20	0.50	0.008	0.020

SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
A	1.25	0.049
B	2.00	0.079
C	2.50	0.098
D	5.00	0.197

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