

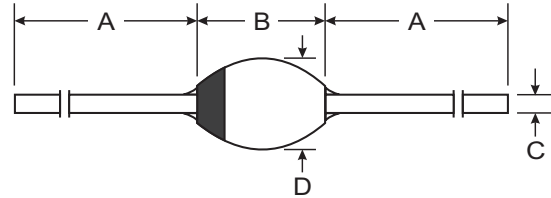


SF4001 - SF4007

1.0A ULTRA-FAST RECOVERY GLASS BODY RECTIFIER

Features

- Hermetically Sealed Glass Body Construction
- Fast Switching for High Efficiency
- Surge Overload Rating to 30A Peak
- Low Reverse Leakage Current



Mechanical Data

- Case: SOD-57, Sintered Glass
- Terminals: Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 0.50 grams (approx.)

SOD-57		
Dim	Min	Max
A	26.0	—
B	—	4.2
C	—	0.82
D	—	3.6
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ $T_j = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	SF 4001	SF 4002	SF 4003	SF 4004	SF 4005	SF 4006	SF 4007	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V_{RWM}								
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1)	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Forward Voltage @ $I_F = 1.0\text{A}$	V_{FM}	1.0			1.7			V	
Peak Reverse Current @ $T_j = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_j = 125^\circ\text{C}$	I_{RM}	5.0				150			μA
Reverse Recovery Time (Note 2)	t_{rr}	50			75			ns	
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	45							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +175							$^\circ\text{C}$

- Note: 1. Valid provided that leads are maintained at ambient temperature at a distance of 10mm from the case.
2. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$. See Figure 5.

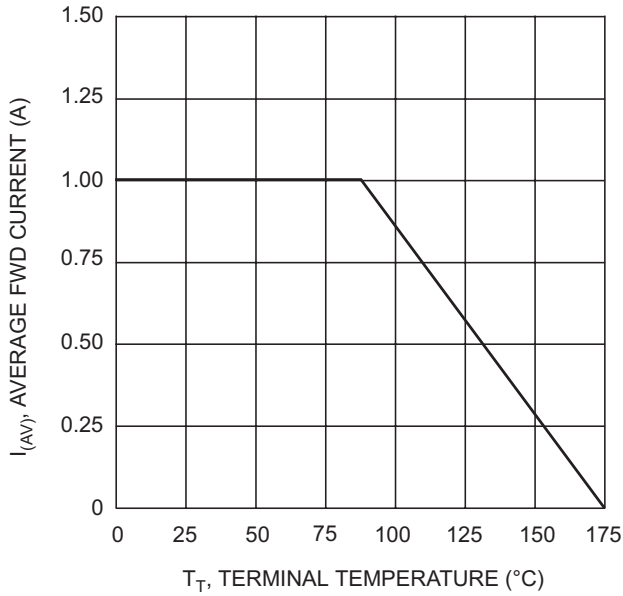


Fig. 1 Forward Current Derating Curve

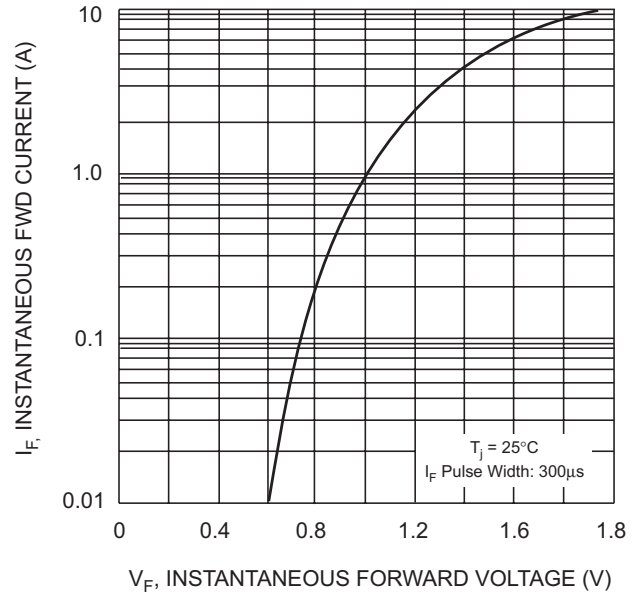


Fig. 2 Typical Forward Characteristics

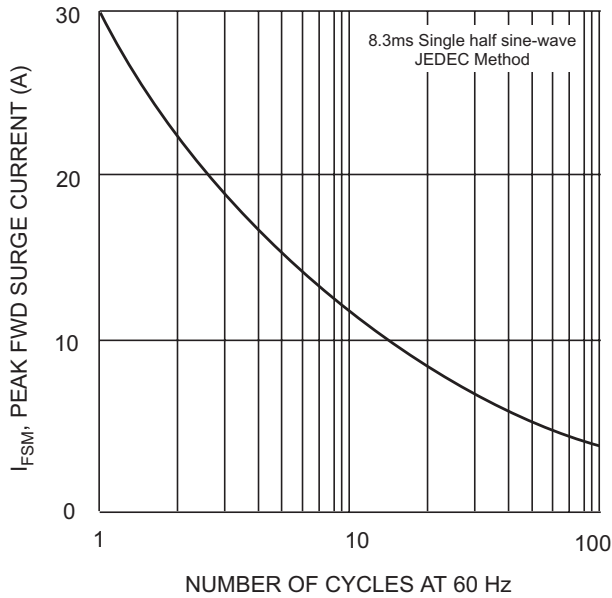


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

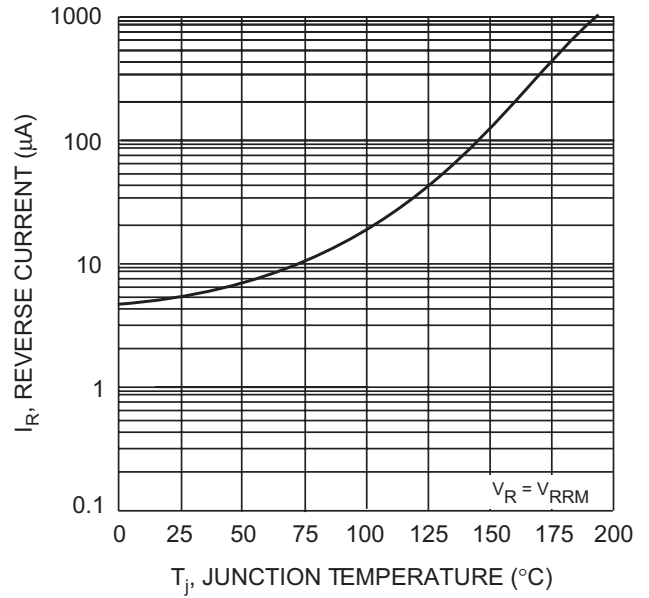
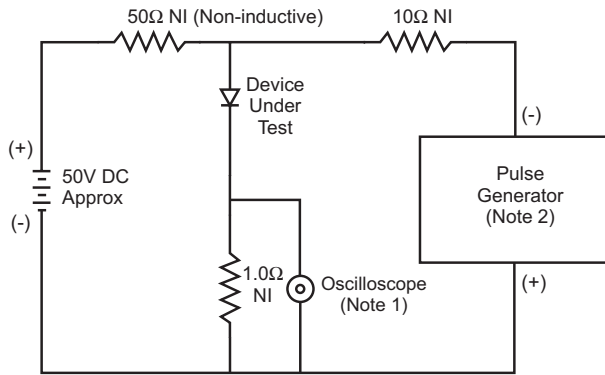
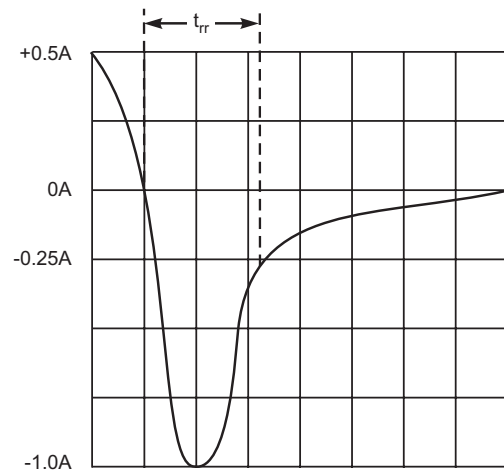


Fig. 4 Typical Reverse Characteristics



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit