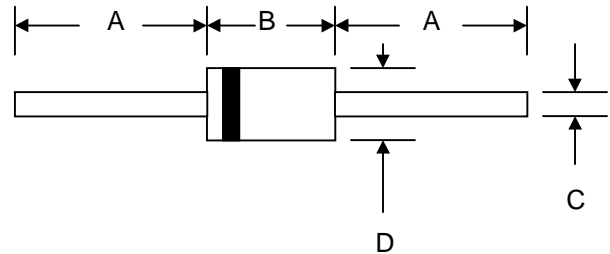


### Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability



### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

DO-201AD		
Dim	Min	Max
A	25.4	—
B	8.50	9.50
C	1.20	1.30
D	5.0	5.60
All Dimensions in mm		

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

Single Phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

Characteristic	Symbol	SF51	SF52	SF53	SF54	SF55	SF56	SF57	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	V
Working Peak Reverse Voltage	$V_{RWM}$								
DC Blocking Voltage	$V_R$								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	210	280	420	V
Average Rectified Output Current (Note 1) @ $T_A = 50^\circ\text{C}$	$I_O$	5.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150							A
Forward Voltage @ $I_F = 5.0\text{A}$	$V_{FM}$	0.95			1.3		1.7		V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	$I_{RM}$	5.0				100			$\mu\text{A}$
Reverse Recovery Time (Note 2)	$t_{rr}$	35							nS
Typical Junction Capacitance (Note 3)	$C_j$	110				50			pF
Operating Temperature Range	$T_j$	-65 to +125							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150							$^\circ\text{C}$

#### \*Glass passivated forms are available upon request

- Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm 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.  
 3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

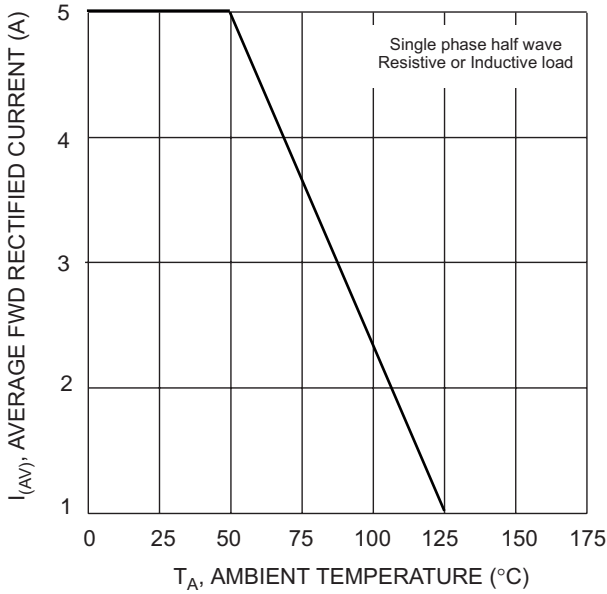


Fig. 1 Forward Current Derating Curve

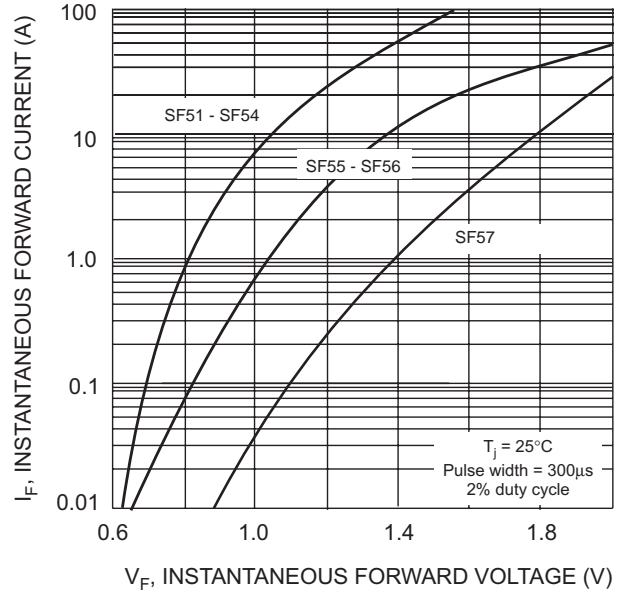


Fig. 2 Typical Forward Characteristics

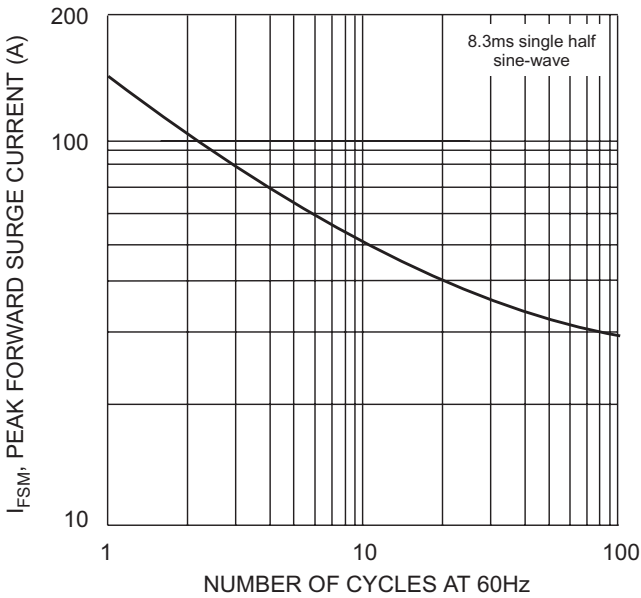


Fig. 3 Peak Forward Surge Current

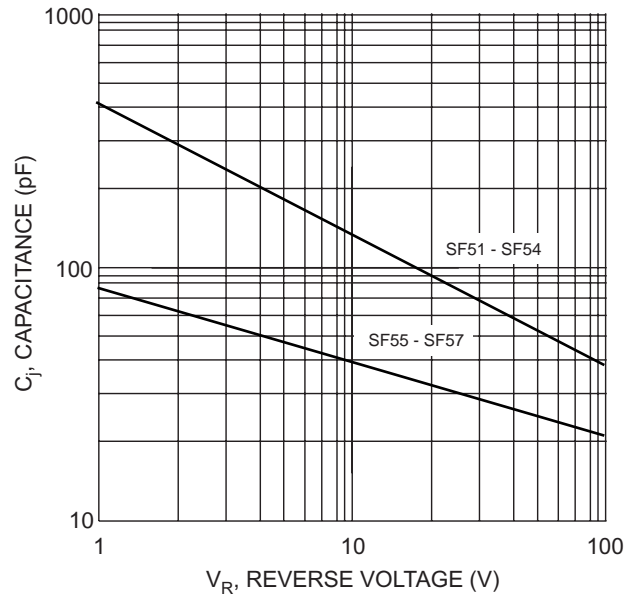
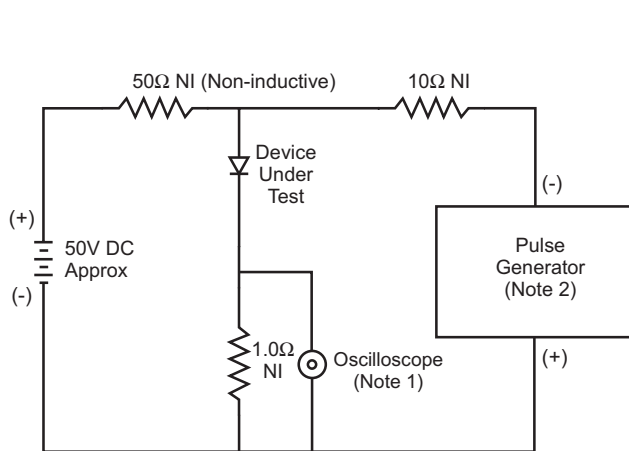
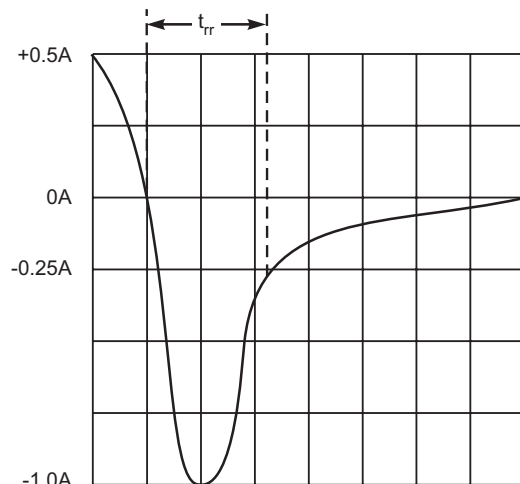


Fig. 4 Typical Junction Capacitance



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



Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## ORDERING INFORMATION

Product No.◆	Package Type	Shipping Quantity
SF51-T3	DO-201AD	1200/Tape & Reel
<b>SF51-TB</b>	DO-201AD	1200/Tape & Box
SF51	DO-201AD	500 Units/Box
SF52-T3	DO-201AD	1200/Tape & Reel
<b>SF52-TB</b>	DO-201AD	1200/Tape & Box
SF52	DO-201AD	500 Units/Box
SF53-T3	DO-201AD	1200/Tape & Reel
<b>SF53-TB</b>	DO-201AD	1200/Tape & Box
SF53	DO-201AD	500 Units/Box
SF54-T3	DO-201AD	1200/Tape & Reel
<b>SF54-TB</b>	DO-201AD	1200/Tape & Box
SF54	DO-201AD	500 Units/Box
SF55-T3	DO-201AD	1200/Tape & Reel
<b>SF55-TB</b>	DO-201AD	1200/Tape & Box
SF55	DO-201AD	500 Units/Box
SF56-T3	DO-201AD	1200/Tape & Reel
<b>SF56-TB</b>	DO-201AD	1200/Tape & Box
SF56	DO-201AD	500 Units/Box
SF57-T3	DO-201AD	1200/Tape & Reel
<b>SF57-TB</b>	DO-201AD	1200/Tape & Box
SF57	DO-201AD	500 Units/Box

Products listed in **bold** are WTE **Preferred** devices.

◆T3 suffix refers to a 13" reel. TB suffix refers to Ammo Pack.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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**WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT.** WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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*We power your everyday.*