

# SF51 THRU SF57



## 5.0 AMP SUPER FAST RECTIFIERS



### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Good for switching mode application

### MECHANICAL DATA

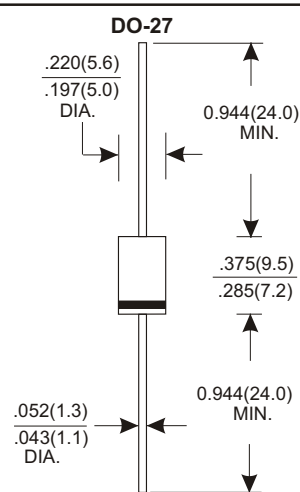
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 1.10 grams

### VOLTAGE RANGE

50 to 600 Volts

### CURRENT

5.0 Amperes



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unieess otherwies specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

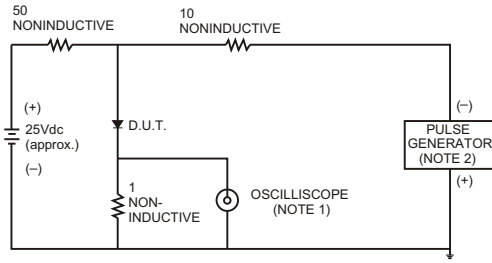
TYPE NUMBER	SF51	SF52	SF53	SF54	SF55	SF56	SF57	UNITS	
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V	
Maximum RMS Voltage	35	70	105	140	210	280	420	V	
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V	
Maximum Average Forward Rectified Current									
.375"(9.5mm) Lead Length at Ta=55°C								5.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)								150	A
Maximum Instantaneous Forward Voltage at 5.0A	0.95					1.25	1.50	V	
Maximum DC Reverse Current Ta=25°C								5.0	A
at Rated DC Blocking Voltage Ta=100°C								50	A
Maximum Reverse Recovery Time (Note 1)								35	nS
Typical Junction Capacitance (Note 2)								50	pF
Operating and Storage Temperature Range Tj, Tstg								-65 — +150	°C

#### NOTES:

- Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES (SF51 THRU SF57)

FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

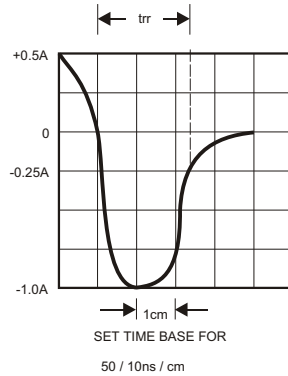


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

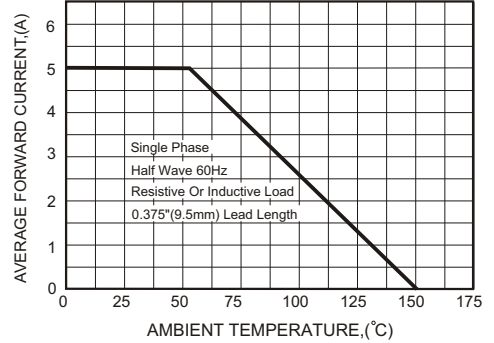


FIG.3-TYPICAL FORWARD CHARACTERISTICS

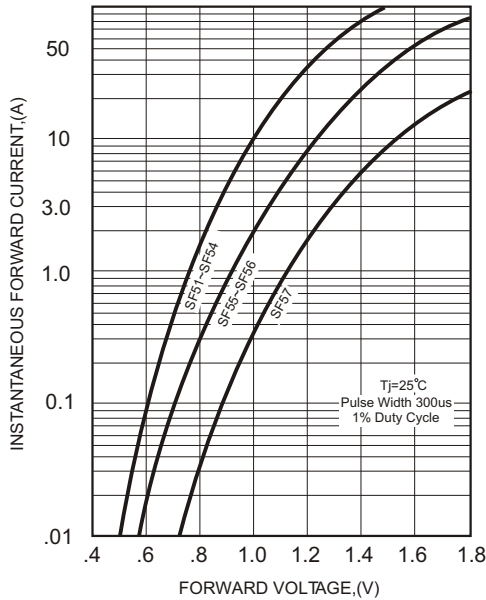


FIG.4-TYPICAL REVERSE CHARACTERISTICS

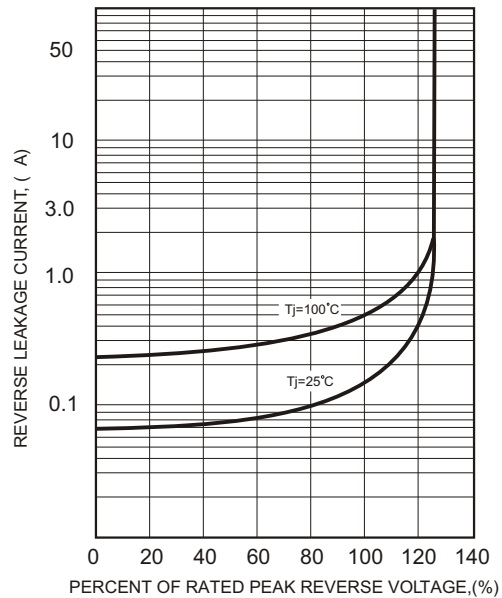


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

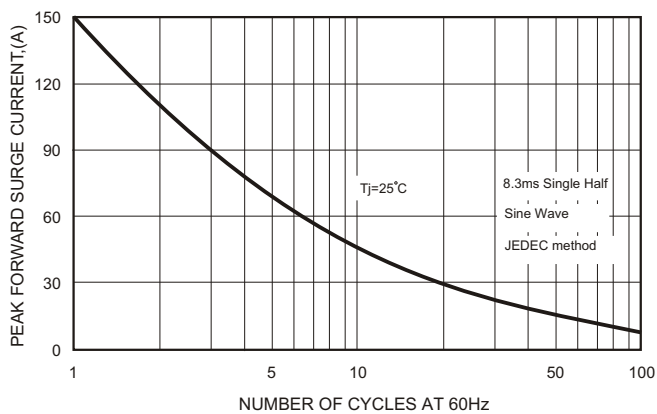


FIG.6-TYPICAL JUNCTION CAPACITANCE

