

# SF81 THRU SF87



## 8.0 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: Lead solderable per MIL-STD-202, method 208 guranteed
- \* Polarity: As Marked
- \* Mounting position: Any

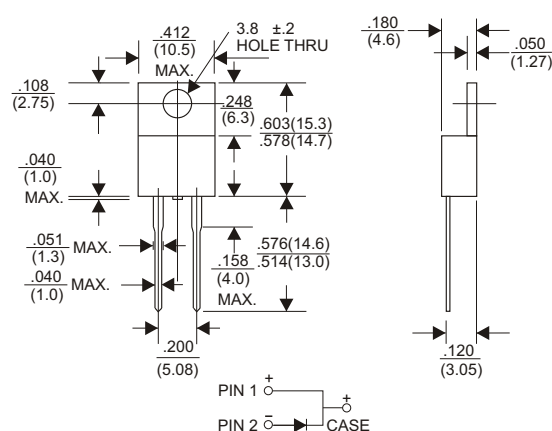
### VOLTAGE RANGE

50 to 600 Volts

### CURRENT

8.0 Amperes

#### TO-220A



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

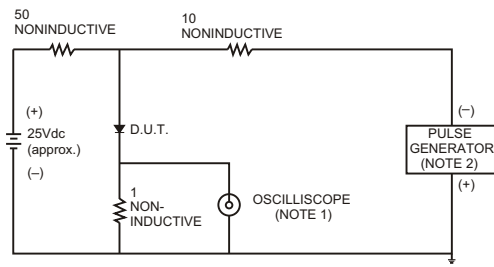
TYPE NUMBER	SF81	SF82	SF83	SF84	SF85	SF86	SF87	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V
Maximum RMS Voltage	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at Tc=100°C	8.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	125							A
Maximum Instantaneous Forward Voltage at 8.0A	1.0				1.3	1.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	Tc=25°C			10				μA
	Tc=100°C			500				μA
Maximum Reverse Recovery Time (Note 1)	35				50			nS
Typical Junction Capacitance (Note 2)	50							PF
Typical Thermal Resistance RθJC	3.0							°C/W
Operating and Storage Temperature Range Tj, Tstg	-65 — +150							°C

#### NOTES:

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

## RATING AND CHARACTERISTIC CURVES (SF81 THRU SF87)

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.

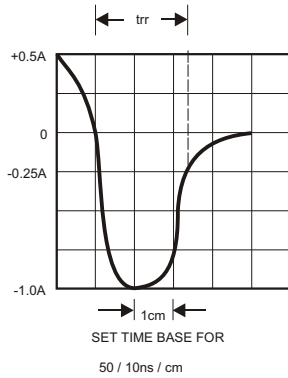


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

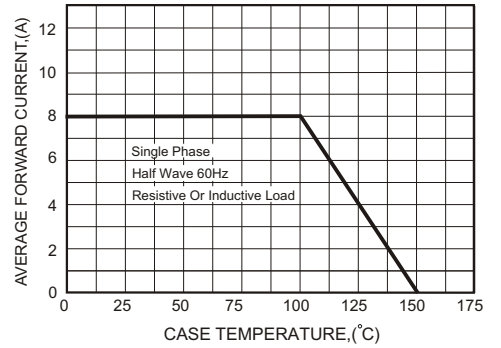


FIG.3-TYPICAL FORWARD CHARACTERISTICS

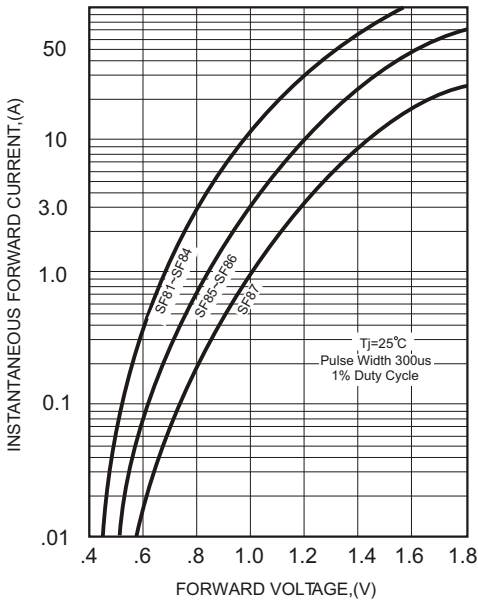


FIG.4-TYPICAL REVERSE CHARACTERISTICS

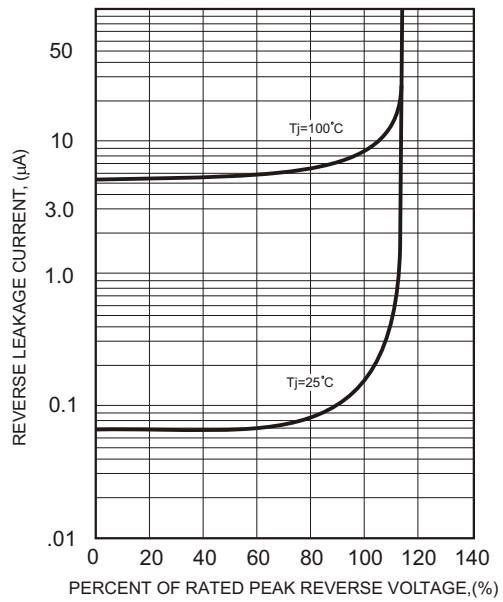


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

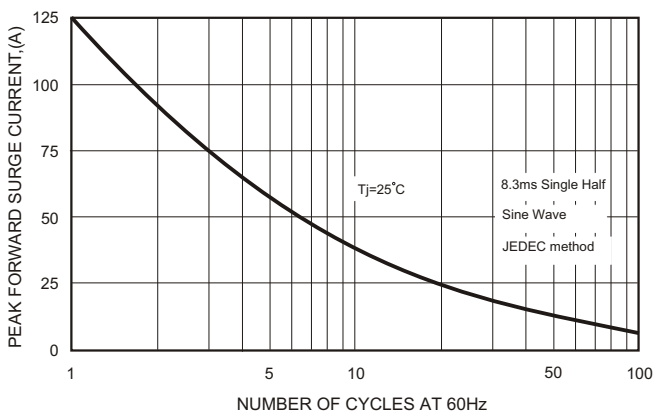


FIG.6-TYPICAL JUNCTION CAPACITANCE

