# SF51 THRU SF57

5.0 AMP SUPER FAST RECTIFIERS

GW



## FEATURES

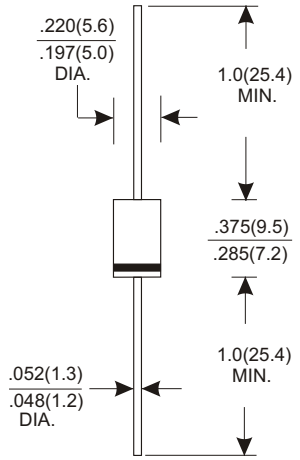
* Low forward voltage drop
* High current capability
* High reliability
* High surge current capability
* Good for switching mode application

## 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

**DO-27**




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25˚C ambient temperature uniess 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 | | | | | | | μA |
| at Rated DC Blocking Voltage Ta=100˚C | 50 | | | | | | | μA |
| Maximum Reverse Recovery Time (Note 1) | 35 | | | | | | | nS |
| Typical Junction Capacitance (Note 2) | 50 | | | | | | | pF |
| Operating and Storage Temperature Range $T_J$, $T_{STG}$ | -65 — +150 | | | | | | | ˚C |

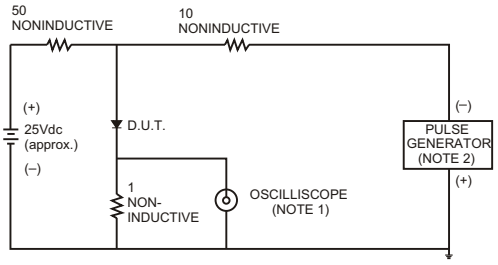
**NOTES:**

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.

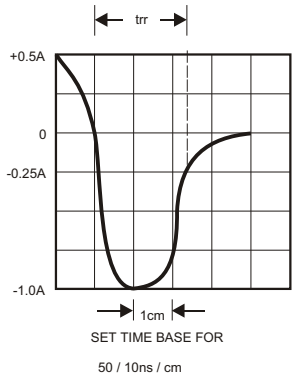
# RATING AND CHARACTERISTIC CURVES (SF51 THRU SF57)

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.




SET TIME BASE FOR

50 / 10ns / cm

FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

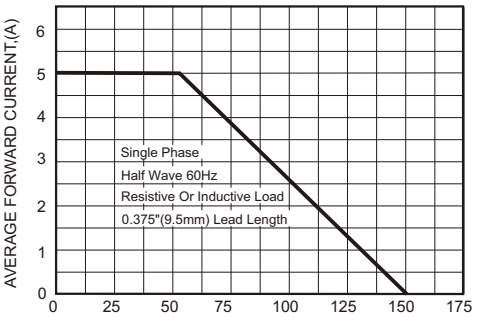



FIG.3-TYPICAL FORWARD CHARACTERISTICS

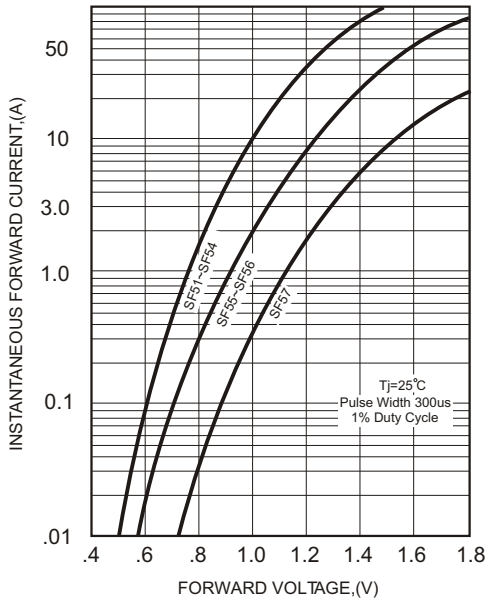



FIG.4-TYPICAL REVERSE CHARACTERISTICS

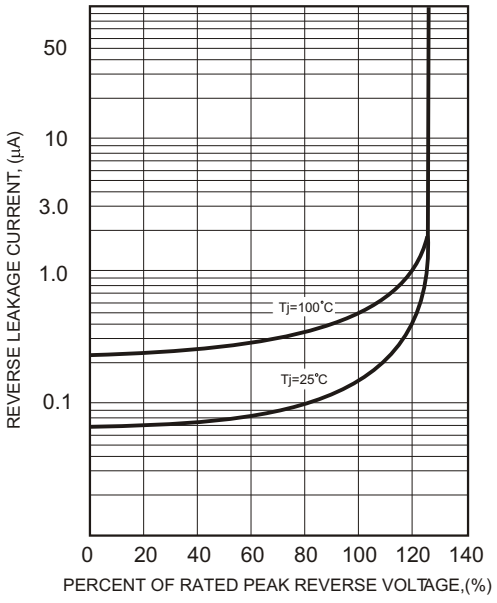



FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

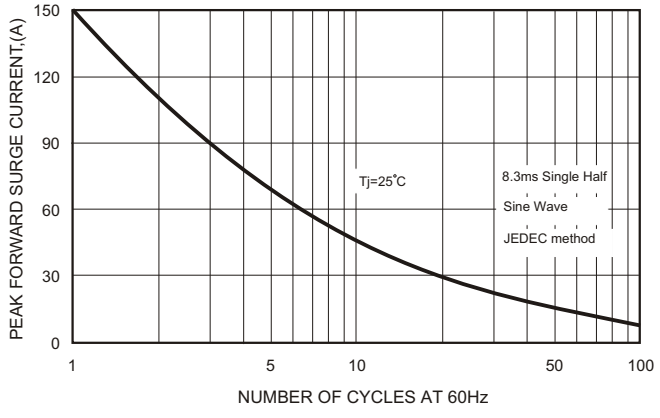



FIG.6-TYPICAL JUNCTION CAPACITANCE

