



# SF11 THRU SF18

## 1.0 AMP. Super Fast Rectifiers



Voltage Range  
50 to 600 Volts  
Current  
1.0 Ampere

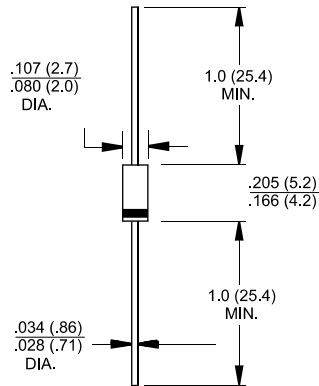
### Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

### Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 250°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.34 gram

### DO-41



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

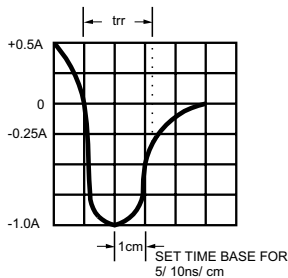
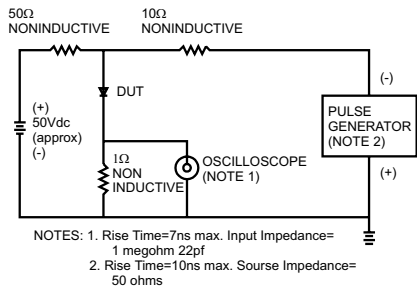
Type Number	SF11	SF12	SF13	SF14	SF15	SF16	SF17	SF18	Units
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ T <sub>A</sub> = 55°C	1.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	30								A
Maximum Instantaneous Forward Voltage @ 1.0A	0.95			1.3			1.7		V
Maximum DC Reverse Current @ T <sub>A</sub> =25°C at Rated DC Blocking Voltage @ T <sub>A</sub> =100°C	5.0 100								uA uA
Maximum Reverse Recovery Time (Note 1)	35								nS
Typical Junction Capacitance (Note 2)	50				25				pF
Operating Temperature Range T <sub>J</sub>	-65 to +125								°C
Storage Temperature Range T <sub>STG</sub>	-65 to +150								°C

Notes: 1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

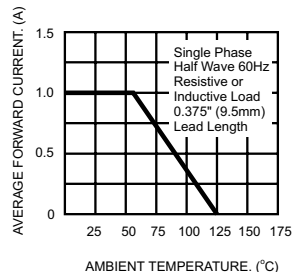
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

## RATINGS AND CHARACTERISTIC CURVES (SF11 THRU SF18)

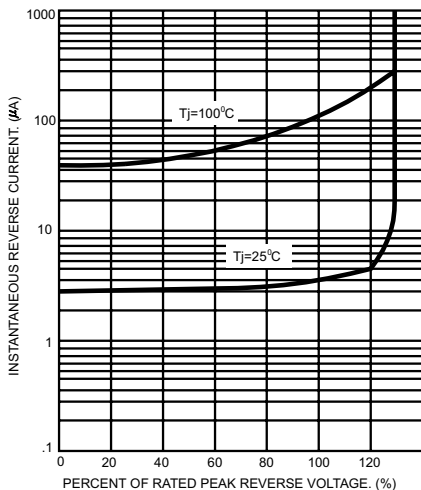
**FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



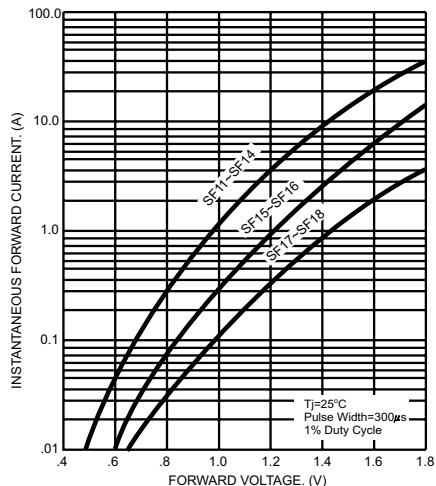
**FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING**



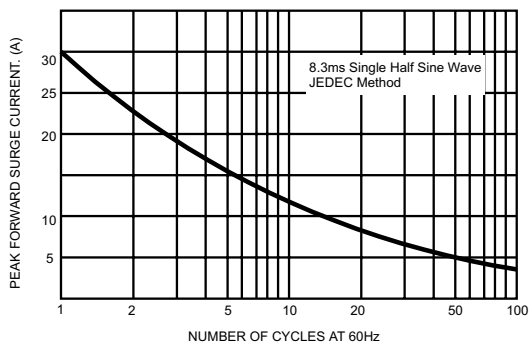
**FIG.3- TYPICAL REVERSE CHARACTERISTICS**



**FIG.4- TYPICAL FORWARD CHARACTERISTICS**



**FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.6- TYPICAL JUNCTION CAPACITANCE**

