



# SF11 THRU SF18

**1.0 AMP. SUPER FAST  
RECTIFIERS**

**Voltage Range  
50 to 600 Volts  
Current  
1.0 Amperes**

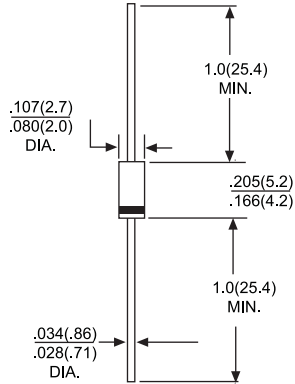
DO-41

**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



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

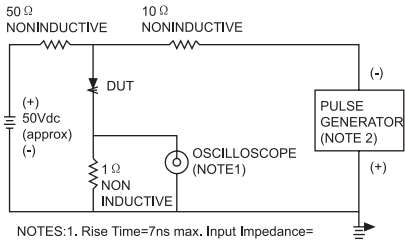
Type Number		SF11	SF12	SF13	SF14	SF15	SF16	SF17	SF18	UNITS	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	500	600	v	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	350	420	v	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	500	600	v	
Maximum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

# RATING AND CHARACTERISTIC CURVES SF11 THRU SF18



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



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

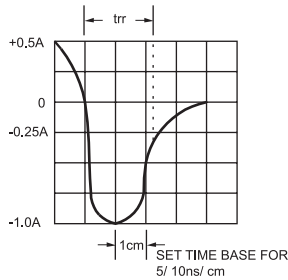


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

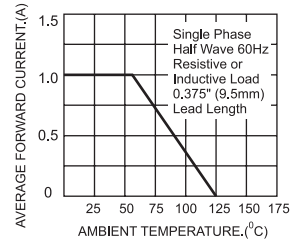


FIG.3- TYPICAL REVERSE CHARACTERISTICS

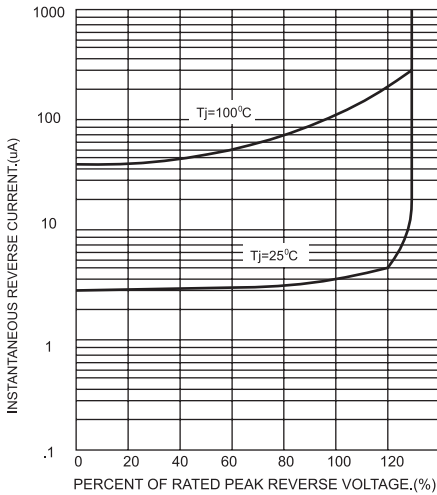


FIG.4- TYPICAL FORWARD CHARACTERISTICS

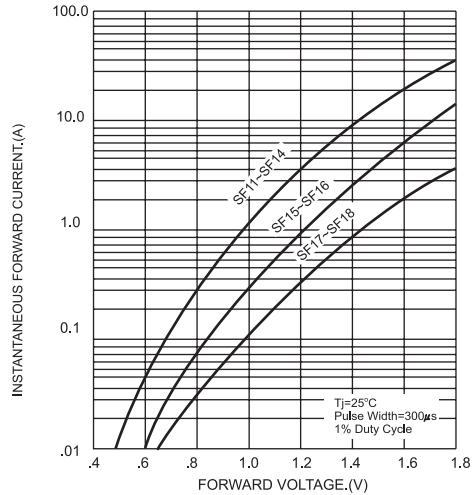


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

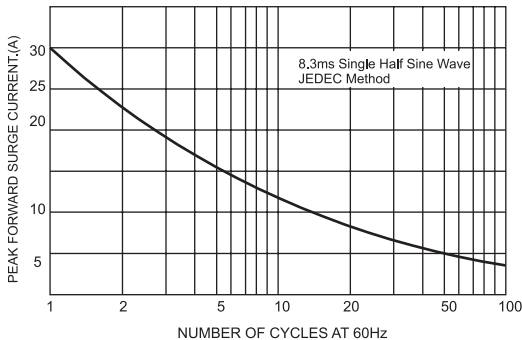


FIG.6- TYPICAL JUNCTION CAPACITANCE

