

SF11S - SF18S

1.0 AMP. Super Fast Rectifiers

A-405

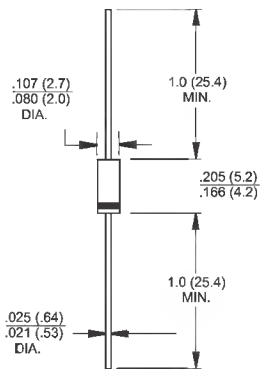


Features

- ✦ High efficiency, low VF
- ✦ High current capability
- ✦ High reliability
- ✦ High surge current capability
- ✦ Low power loss.
- ✦ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✦ Green compound with suffix "G" on packing code & prefix "G" on datecode.

Mechanical Data

- ✦ Cases: Molded plastic
- ✦ Epoxy: UL 94V-0 rate flame retardant
- ✦ Lead: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✦ Polarity: Color band denotes cathode
- ✦ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✦ Weight: 0.22 gram



Dimensions in inches and (millimeters)

Marking Diagram



- SFXXS = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

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	Symbol	SF	SF	SF	SF	SF	SF	SF	SF	Units	
		11S	12S	13S	14S	15S	16S	17S	18S		
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	500	600	V	
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	350	420	V	
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	500	600	V	
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @TA = 55 °C	I(AV)	1.0								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	IFSM	30								A	
Maximum Instantaneous Forward Voltage @ 1.0A	VF	0.95			1.3		1.7			V	
Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @ TA=100 °C	IR	5.0					100				uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	35								nS	
Typical Junction Capacitance (Note 2)	Cj	30				15				pF	
Typical Thermal Resistance	RθJA	100								°C/W	
Operating Temperature Range	TJ	-65 to +125								°C	
Storage Temperature Range	TSTG	-65 to +150								°C	

- Notes:
1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
 3. Mount on Cu-Pad Size 5mm x 5mm on PCB.

RATINGS AND CHARACTERISTIC CURVES (SF11S THRU SF18S)

FIG.1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

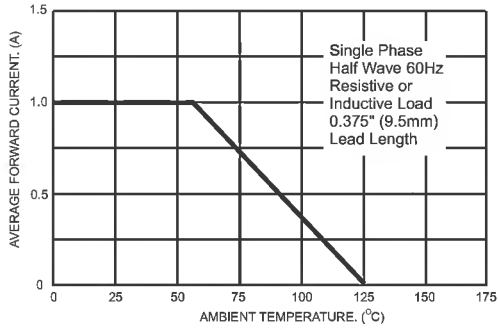


FIG.2- TYPICAL REVERSE CHARACTERISTICS

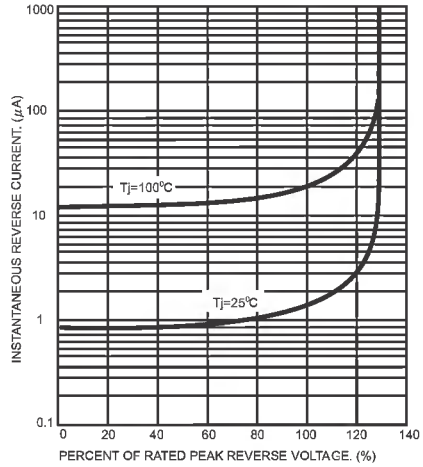


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

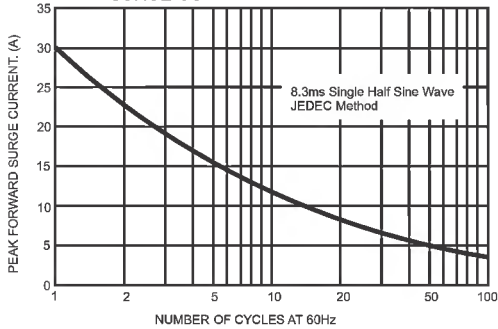


FIG.5- TYPICAL FORWARD CHARACTERISTICS

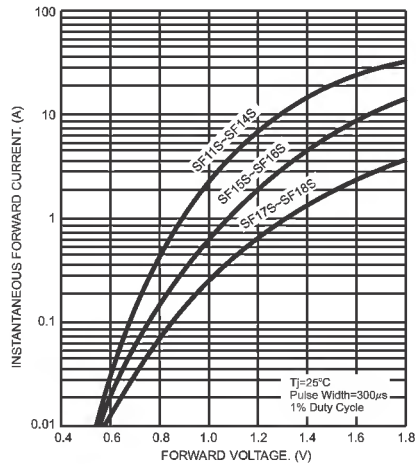


FIG.4- TYPICAL JUNCTION CAPACITANCE

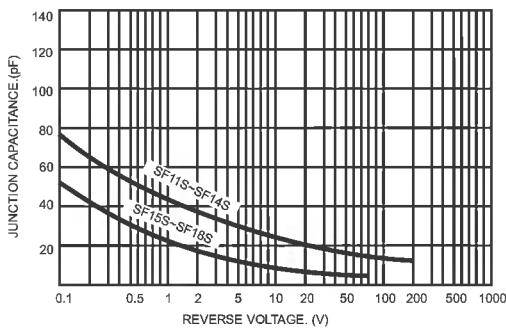
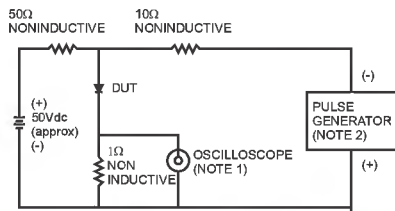


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

