



SF11S - SF18S

1.0 AMP. Super Fast Rectifiers

A-405

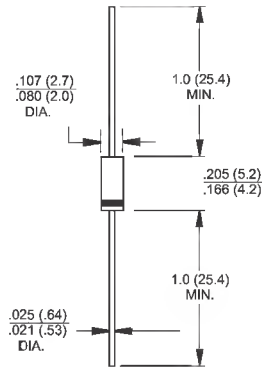


Features

- ◇ 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	V _{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ T _A = 55 °C	I(AV)	1.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30								A
Maximum Instantaneous Forward Voltage @ 1.0A	V _F	0.95			1.3		1.7			V
Maximum DC Reverse Current @ T _A =25 °C at Rated DC Blocking Voltage @ T _A =100 °C	I _R					5.0				uA uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}					35				nS
Typical Junction Capacitance (Note 2)	C _j	30			15					pF
Typical Thermal Resistance	R _{θJA}					100				°C/W
Operating Temperature Range	T _J					-65 to +125				°C
Storage Temperature Range	T _{STG}					-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

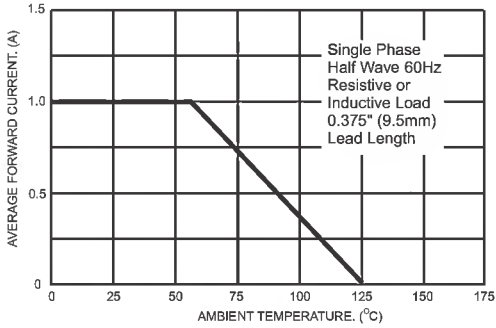


FIG.2- TYPICAL REVERSE CHARACTERISTICS

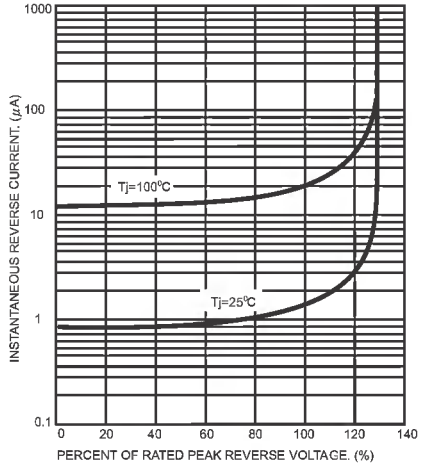


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

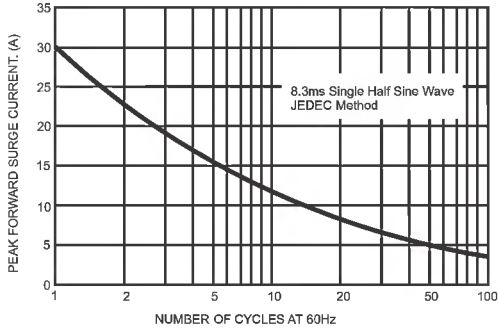


FIG.5- TYPICAL FORWARD CHARACTERISTICS

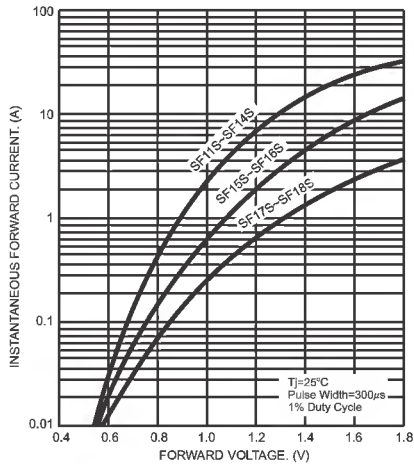


FIG.4- TYPICAL JUNCTION CAPACITANCE

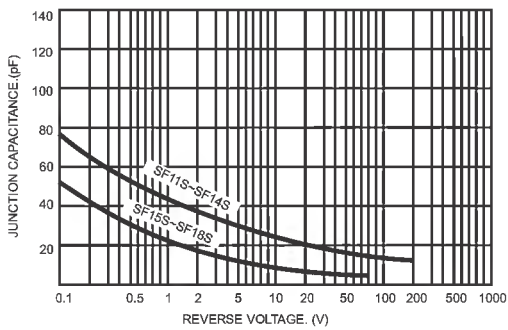
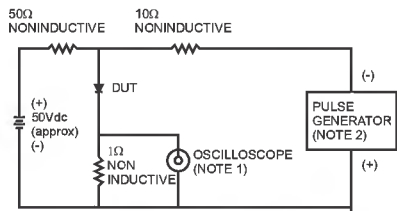


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

