

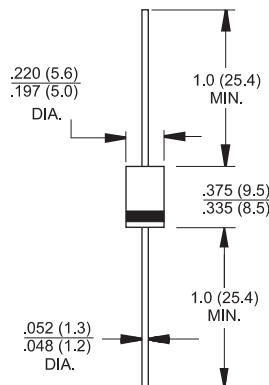


## Features

- ✦ 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

## 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: 1.2 grams



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	Symbol	SF 61	SF 62	SF 63	SF 64	SF 65	SF 66	SF 67	SF 68	Units
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 @ $T_A = 55^\circ\text{C}$	$I_{(AV)}$	6.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	150								A
Maximum Instantaneous Forward Voltage @ 6.0A	$V_F$	0.975			1.3		1.7			V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	5.0 100								 uA uA
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	35								nS
Typical Junction Capacitance (Note 2)	$C_j$	120				70				pF
Typical Thermal resistance	$R_{\theta JA}$	30								$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-65 to +125								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150								$^\circ\text{C}$

- Notes:
1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
  2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
  3. Mount on Cu-Pad Size 16mm x 16mm on PCB.

## RATINGS AND CHARACTERISTIC CURVES (SF61 THRU SF68)

FIG.1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

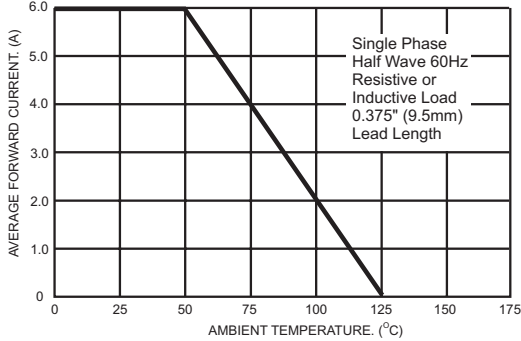


FIG.2- TYPICAL REVERSE CHARACTERISTICS

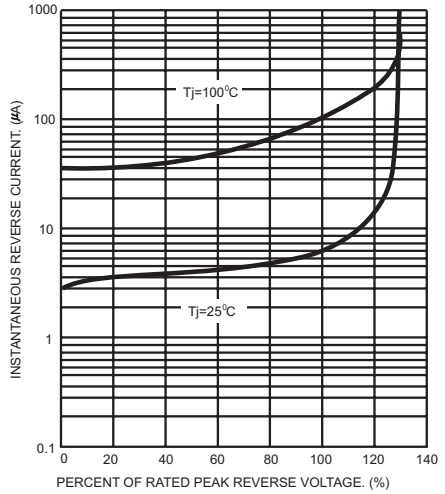


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

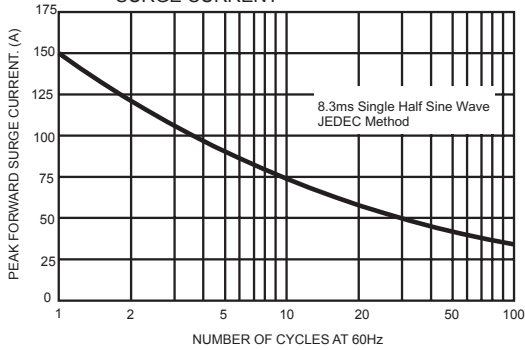


FIG.5- TYPICAL FORWARD CHARACTERISTICS

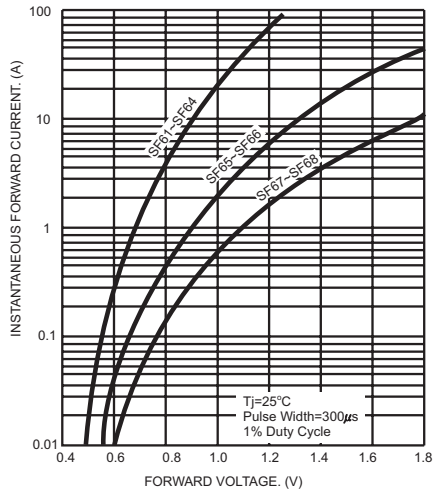


FIG.4- TYPICAL JUNCTION CAPACITANCE

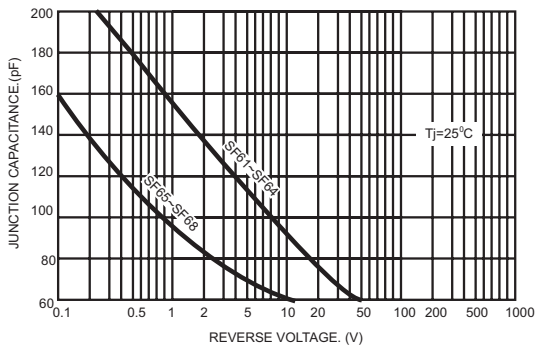


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

