



# SFD601G THRU SFD608G

6.0 AMPS. Glass Passivated Super Fast Rectifiers



Voltage Range  
50 to 600 Volts  
Current  
6.0 Amperes

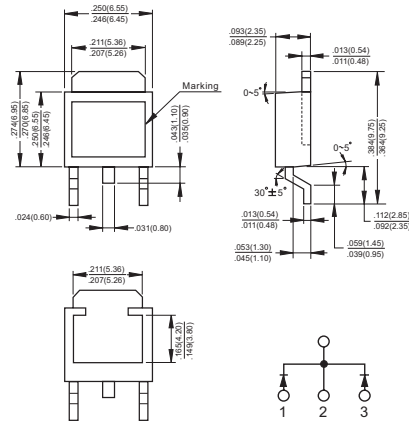
## Features

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

## Mechanical Data

- ✧ Case: Epoxy molded
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Terminals: Leads solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds.
- ✧ Weight: 0.4 grams

## DPAK



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	SFD 601G	SFD 602G	SFD 603G	SFD 604G	SFD 605G	SFD 606G	SFD 607G	SFD 608G	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	480	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current @ $T_C = 137^\circ\text{C}$	$I_{(AV)}$	6.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	50								A
Maximum Instantaneous Forward Voltage @ 3.0A	$V_F$	1.1			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				200				$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time(Note1)	$T_{rr}$	35								nS
Typical Thermal Resistance (Note 3)	$R_{\theta_{JC}}$	9.0								$^\circ\text{C}/\text{W}$
Typical Junction Capacitance (Note 2)	$C_j$	50				30				pF
Operating Temperature Range	$T_J$	-65 to +150								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150								$^\circ\text{C}$

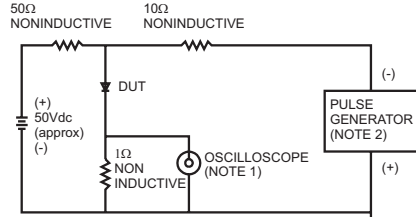
Notes: 1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

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

3. Thermal Resistance from Junction to Case

## RATINGS AND CHARACTERISTIC CURVES (SFD601G THRU SFD608G)

FIG. 1- 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

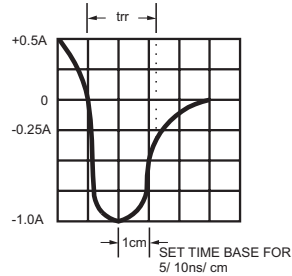


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

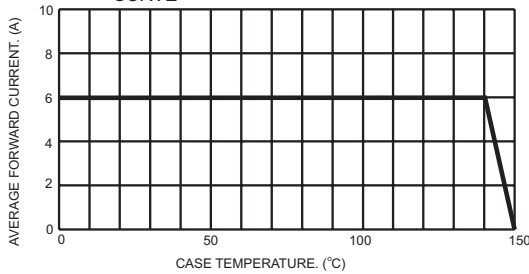


FIG.3- TYPICAL REVERSE CHARACTERISTICS

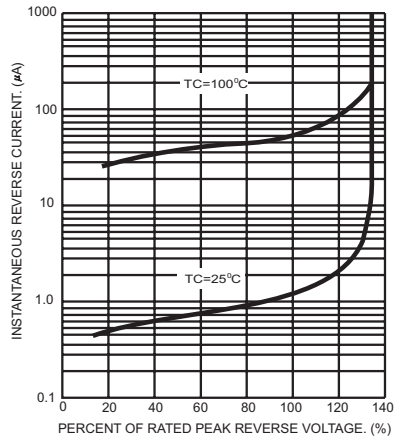


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

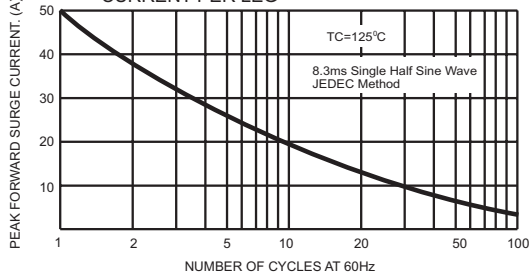


FIG.6- TYPICAL FORWARD CHARACTERISTICS PER LEG

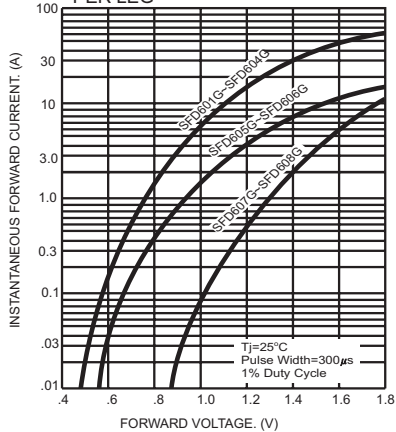


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

