SF2004G THRU SF2006G

20.0 AMPS. Glass Passivated Super Fast Rectifiers

Voltage Range
200 to 400 Volts
Current
20.0 Amperes

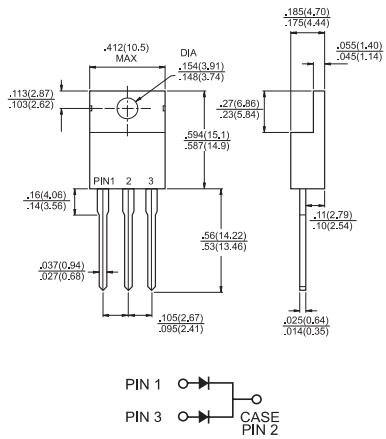
Features

- ✧ 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
- ✧ Terminals: Leads solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds .16",(4.06mm) from case.
- ✧ Weight: 2.24 grams

TO-220



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

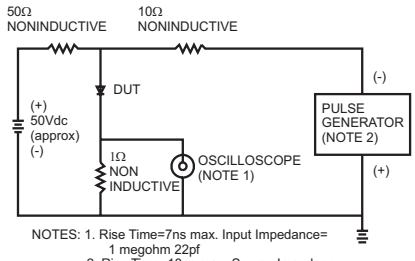
Rating at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	SF2004G	SF2006G	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	V
Maximum RMS Voltage	V_{RMS}	140	280	V
Maximum DC Blocking Voltage	V_{DC}	200	400	V
Maximum Average Forward Rectified Current @T_C = 100℃	$I_{(AV)}$	20.0		A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	125		A
Maximum Instantaneous Forward Voltage @ 10.0A	V_F	0.975	1.35	V
Maximum DC Reverse Current @ T_A=25℃ at Rated DC Blocking Voltage @ T_A=100℃	I_R	5.0 400		uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	35		nS
Typical Junction Capacitance (Note 2)	Cj	80		pF
Typical Thermal Resistance (Note 3)	$R\theta_{JC}$	2.5		℃/W
Operating Temperature Range	T_J	-65 to +150		℃
Storage Temperature Range	T_{STG}	-65 to +150		℃

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. Thermal Resistance from Junction to Case Mounted on Heatsink. Size of 3" x 5" x 0.25" Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (SF2004G THRU SF2006G)

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. Sourse Impedance= 50 ohms

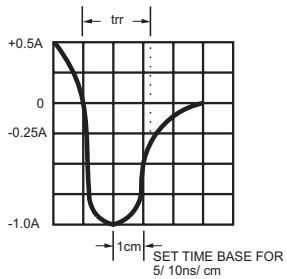


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

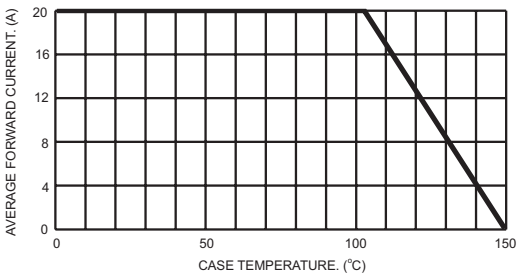


FIG.3- TYPICAL REVERSE CHARACTERISTICS

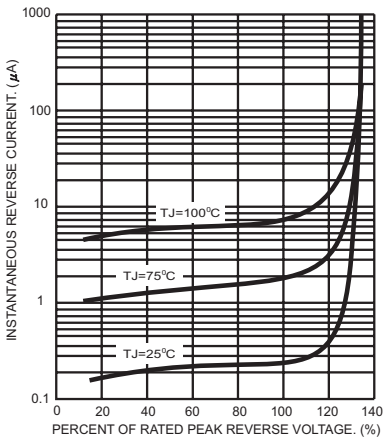


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

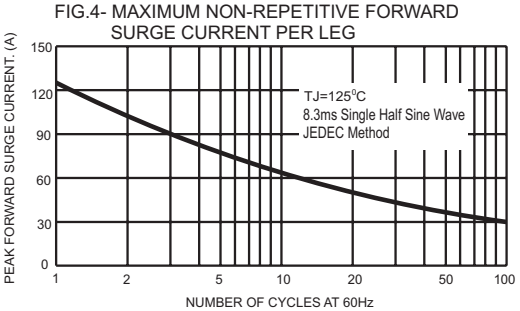


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

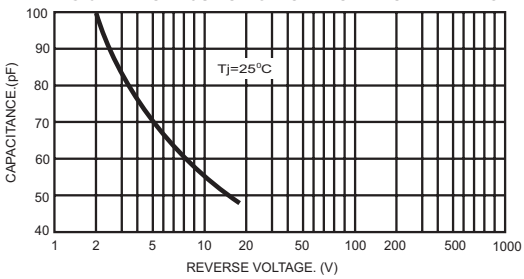
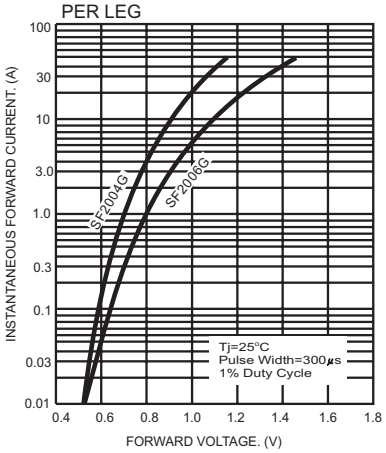



FIG.6- TYPICAL FORWARD CHARACTERISTICS PER LEG