



SF2001G - SF2008G

20.0 AMPS. Glass Passivated Super Fast Rectifiers

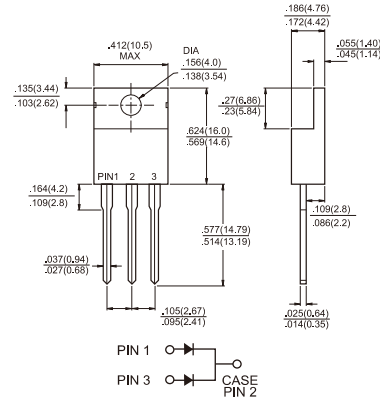
TO-220AB

Features

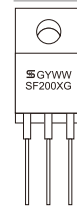
- UL Recognized File # E-326243
- High efficiency, low VF
- High current capability
- High reliability
- High surge current capability
- Low power loss.
- For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- Green compound with suffix "G" on packing code & prefix "G" on datecode.

Mechanical Data

- Cases: TO-220AB Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Pure tin plated, lead free. 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: 1.90 grams



Dimensions in inches and (millimeters)



Marking Diagram

SF200XG = 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 2001G	SF 2002G	SF 2003G	SF 2004G	SF 2005G	SF 2006G	SF 2007G	SF 2008G	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 @T _C = 100°C	I _{F(AV)}	20								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 @ 10A	V _F	0.975				1.3		1.7		V
Maximum DC Reverse Current at @ T _A =25°C Rated DC Blocking Voltage(Note1) @ T _A =125°C	I _R	5.0 400								uA uA
Maximum Reverse Recovery Time (Note 2)	T _{rr}	35								nS
Typical Junction Capacitance (Note 3)	C _j	80								pF
Typical Thermal Resistance (Note 4)	R _{θJC}	2.5								°C/W
Operating Temperature Range	T _J	-55 to +150								°C
Storage Temperature Range	T _{STG}	-55 to +150								°C

Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle
2. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
3. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
4. Mounted on Heatsink size of 3" x 5" x 0.25" Al-Plate.

Version: D10

RATINGS AND CHARACTERISTIC CURVES (SF2001G THRU SF2008G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

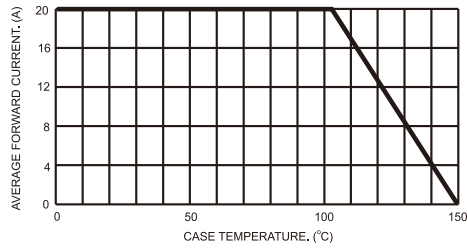


FIG.2- TYPICAL REVERSE CHARACTERISTICS

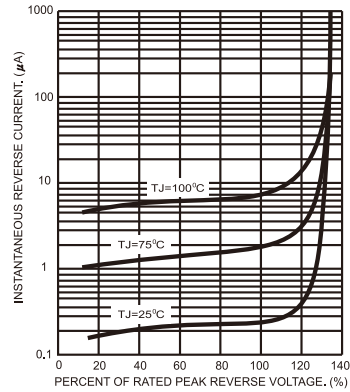


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

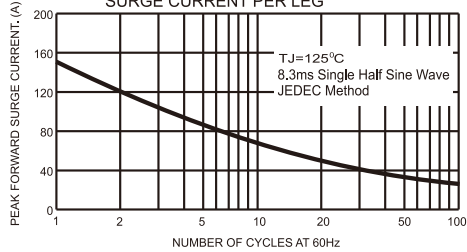


FIG.5- TYPICAL FORWARD CHARACTERISTICS PER LEG

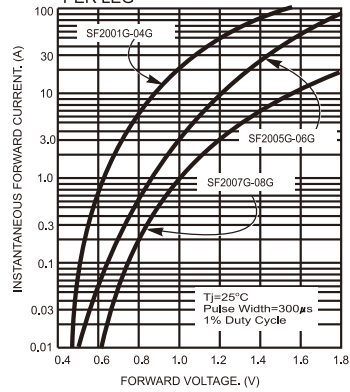


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

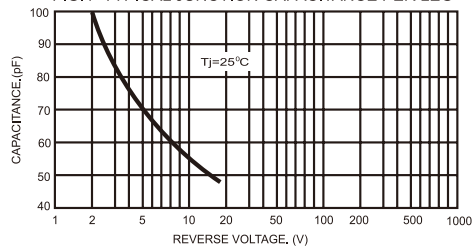


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

