



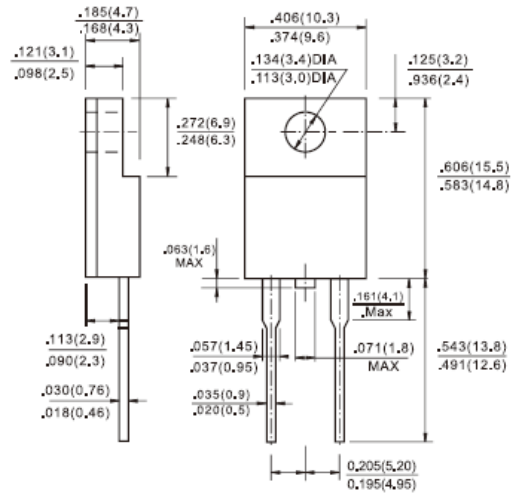
**SFAF1601G - SFAF1608G**  
**16.0AMPS. Isolated Glass Passivated Super Fast Rectifiers**  
**ITO-220AC**

**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.

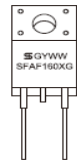
**Mechanical Data**

- ✦ Cases: ITO-220AC 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: 1.70 grams



**Dimensions in inches and (millimeters)**

**Marking Diagram**



- SFAF160XG = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

**Maximum Ratings and Electrical Characteristics**

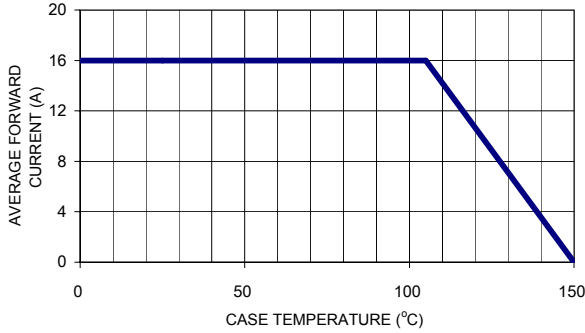
Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

Type Number	Symbol	SFAF 1601G	SFAF 1602G	SFAF 1603G	SFAF 1604G	SFAF 1605G	SFAF 1606G	SFAF 1607G	SFAF 1608G	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 @ $T_C=100^\circ C$	$I_{F(AV)}$	16								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	200								A
Maximum Instantaneous Forward Voltage (Note 1) @ 16 A	$V_F$	0.975			1.3		1.7			V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=100^\circ C$	$I_R$					10		400		uA
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$					35				nS
Typical Junction Capacitance (Note 3)	$C_j$	130				100				pF
Typical Thermal Resistance C (Note 4)	$R_{\theta JC}$					1.3				°C/W
Operating Temperature Range	$T_J$					- 65 to + 150				°C
Storage Temperature Range	$T_{STG}$					- 65 to + 150				°C

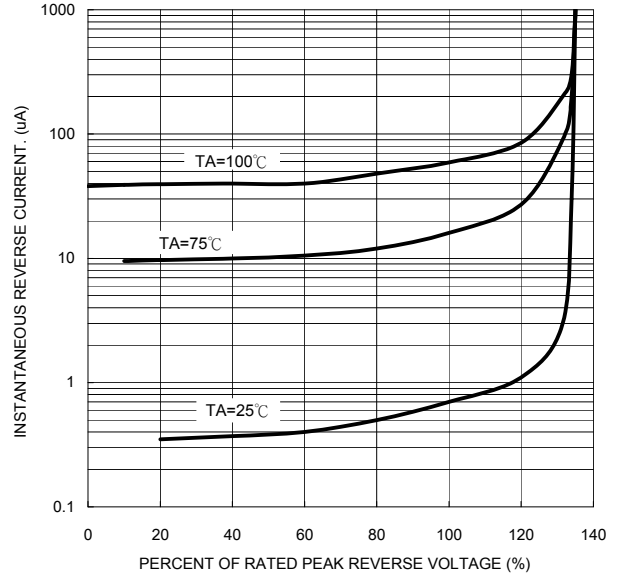
Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle  
 Note 2: Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$ .  
 Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.  
 Note 4: Mounted on Heatsink Size of 3" x 5" x 0.25" Al-Plate.

**RATINGS AND CHARACTERISTIC CURVES (SFAF1601G THRU SFAF1608G)**

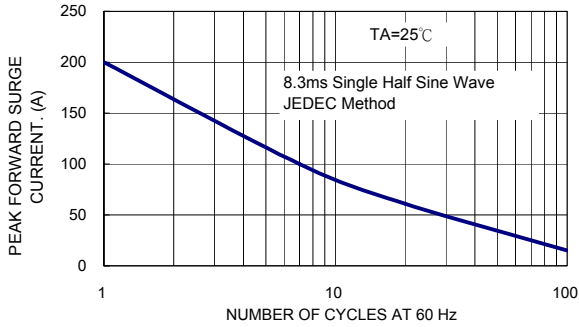
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**



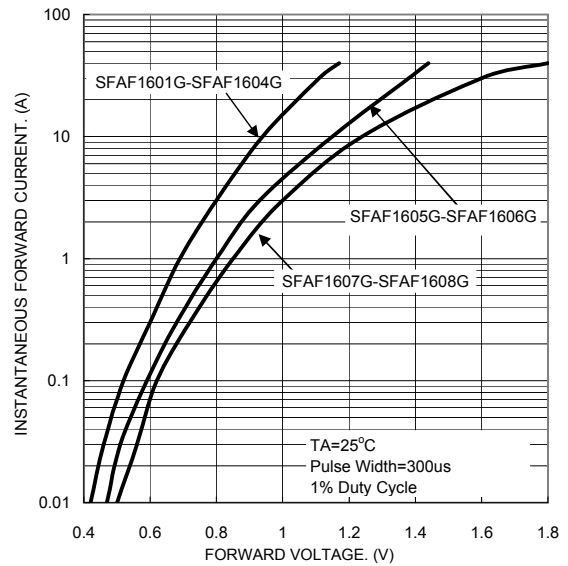
**FIG. 2- TYPICAL REVERSE CHARACTERISTICS**



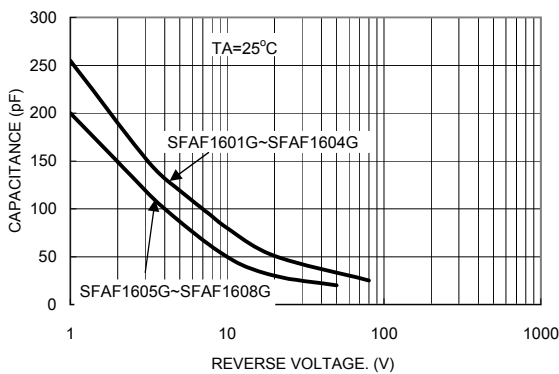
**FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 5- TYPICAL FORWARD CHARACTERISTICS**



**FIG. 4- TYPICAL JUNCTION CAPACITANCE**



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

