

### D<sup>2</sup>PAK

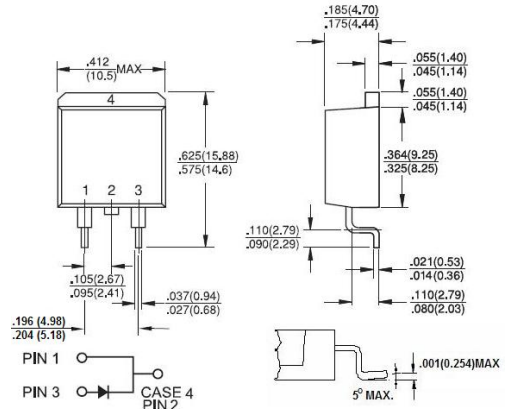


### Features

- ✦ 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
- ✦ Green compound with suffix "G" on packing code & prefix "G" on datecode.

### Mechanical Data

- ✦ Cases: D<sup>2</sup>PAK 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: 1.33 grams



Dimensions in inches and (millimeters)

Marking Diagram



- SFAS80XG = 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.

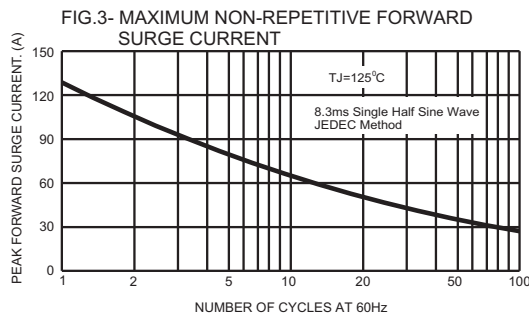
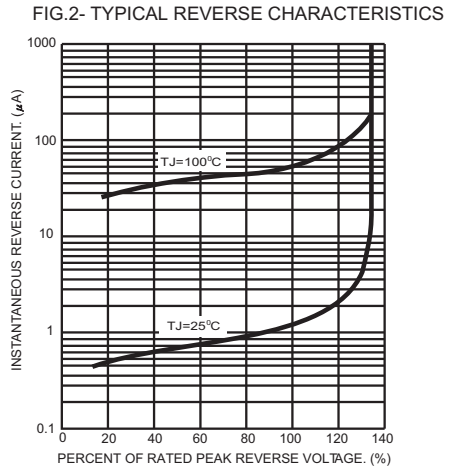
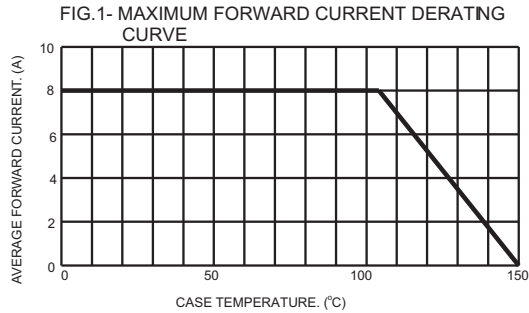
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

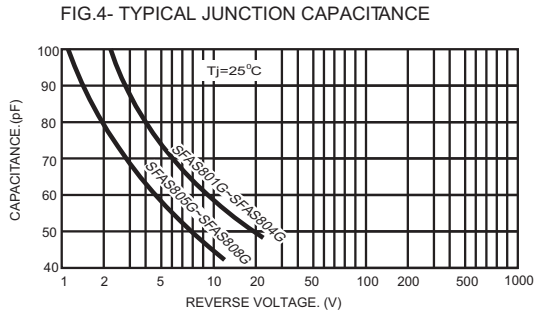
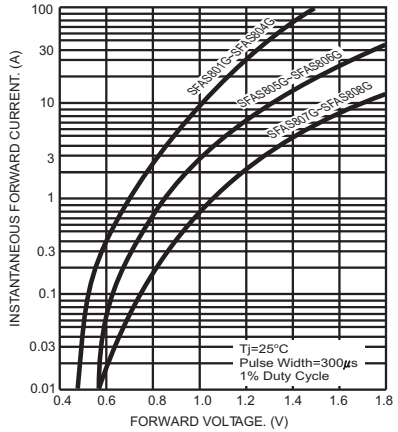
Type Number	Symbol	SFAS 801G	SFAS 802G	SFAS 803G	SFAS 804G	SFAS 805G	SFAS 806G	SFAS 807G	SFAS 808G	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current @ $T_C = 100^\circ\text{C}$	$I_{(AV)}$	8.0								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 @ 8.0A	$V_F$	0.975			1.3		1.7			V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$					10				uA
						400				uA
Maximum Reverse Recovery Time(Note1)	$T_{rr}$					35				nS
Typical Junction Capacitance (Note 2)	$C_j$	80				60				pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2.2								$^\circ\text{C/W}$
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:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$
  2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
  3. Mounted on Heatsink size of 2" x 3" x 0.25".

## RATINGS AND CHARACTERISTIC CURVES (SFAS801G THRU SFAS808G)



**FIG.5- TYPICAL FORWARD CHARACTERISTICS**



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

