

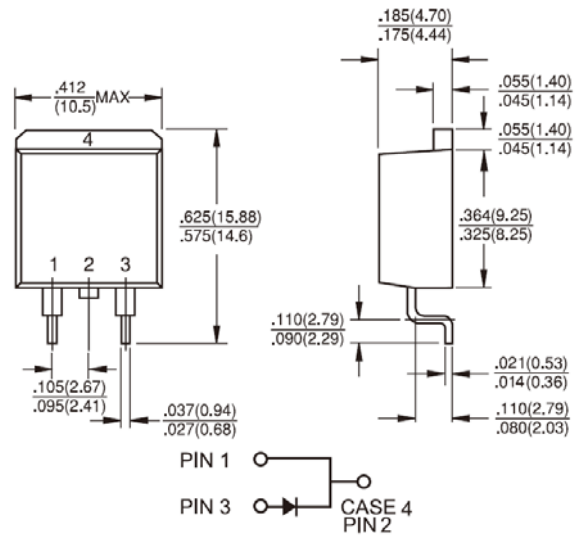


**Features**

- ✧ UL Recognized File #E-326854
- ✧ Glass passivated junction chip
- ✧ 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
- ✧ Qualified as per AEC-Q101

**Mechanical Data**

- ✧ Case: 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: 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	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current @ T <sub>C</sub> =100°C	I <sub>F(AV)</sub>	8.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I <sub>FSM</sub>	125								A
Maximum Instantaneous Forward Voltage @ 8.0A	V <sub>F</sub>	0.95			1.3		1.7			V
Maximum Reverse Current @ Rated VR T <sub>A</sub> =25 °C T <sub>A</sub> =100 °C	I <sub>R</sub>					10		400		uA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>					35				nS
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	80			60					pF
Typical Thermal Resistance	R <sub>θJC</sub>	2.2								°C/W
Operating Temperature Range	T <sub>J</sub>	- 65 to + 150								°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 150								°C

Note 1: Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

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

## RATINGS AND CHARACTERISTIC CURVES (SFAS801G THRU SFAS808G)

FIG.1 FORWARD CURRENT DERATING CURVE

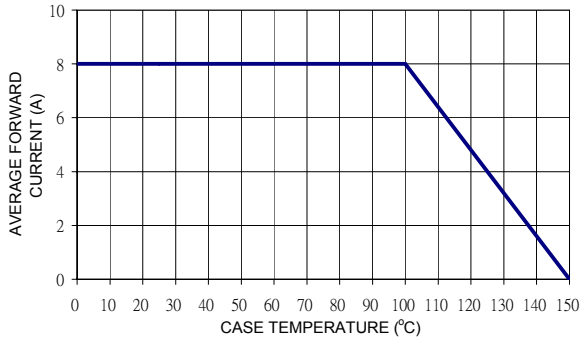


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

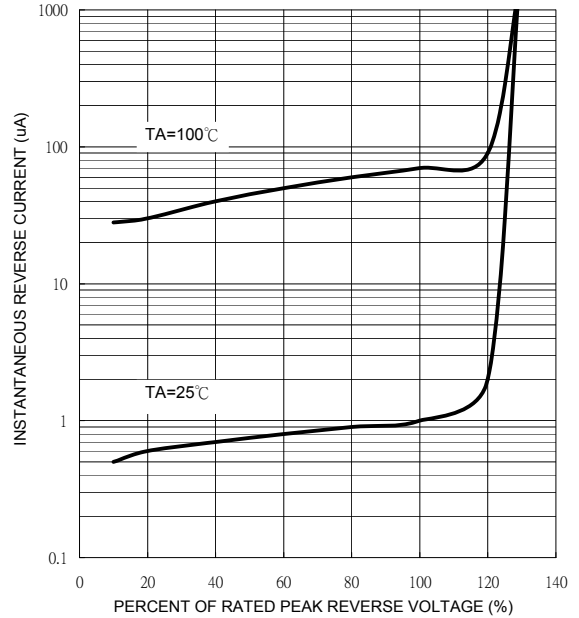


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

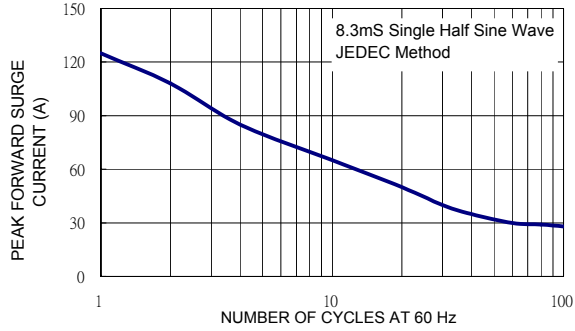


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

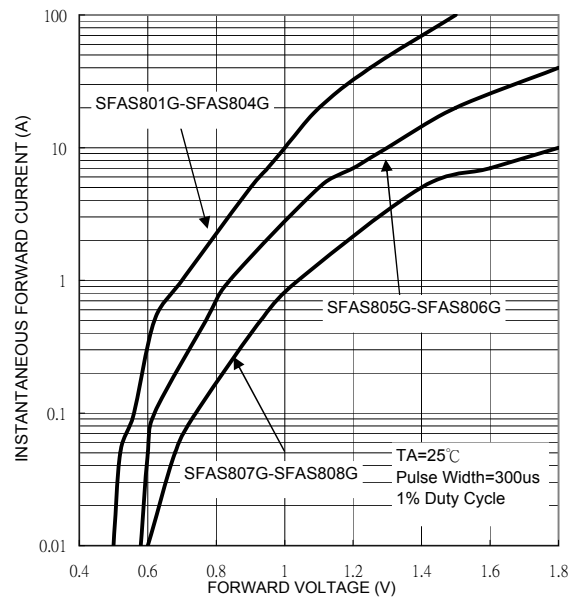


FIG. 4 TYPICAL JUNCTION CAPACITANCE

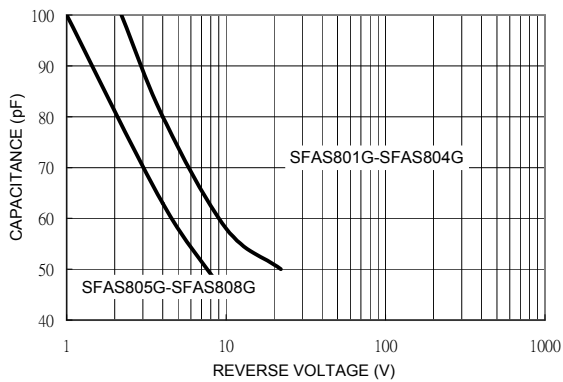


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

