

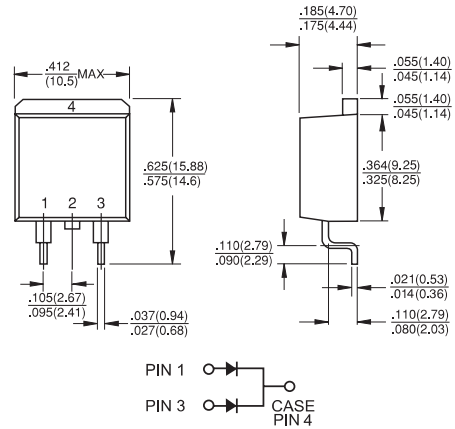


Features

- ✦ High efficiency, low VF
- ✦ High current capability
- ✦ High reliability
- ✦ High surge current capability
- ✦ Low power loss.
- ✦ For use in low voltage, high frequency inventor, free wheeling, and polarity protection application

Mechanical Data

- ✦ Cases: 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)

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	SFS 1601G	SFS 1602G	SFS 1603G	SFS 1604G	SFS 1605G	SFS 1606G	SFS 1607G	SFS 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 @ $T_C = 100^\circ\text{C}$	$I_{(AV)}$	16.0								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				400				μA μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	35								nS
Typical Junction Capacitance (Note 2)	C_j	80				60				pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2.5								$^\circ\text{C}/\text{W}$
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: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
 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.

RATINGS AND CHARACTERISTIC CURVES (SFS1601G THRU SFS1608G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

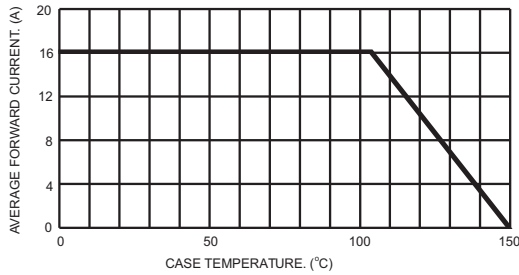


FIG.2- TYPICAL REVERSE CHARACTERISTICS

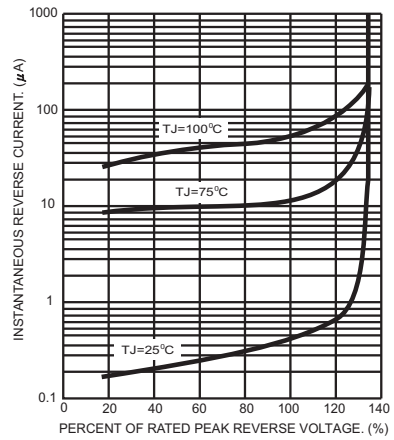


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

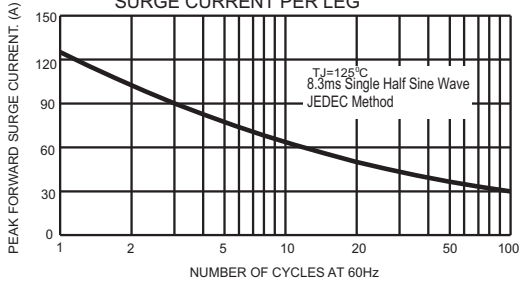


FIG.5- TYPICAL FORWARD CHARACTERISTICS PER LEG

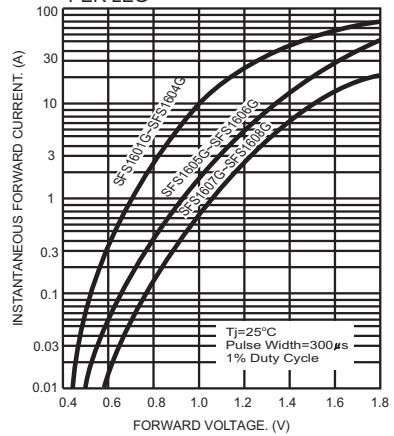


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

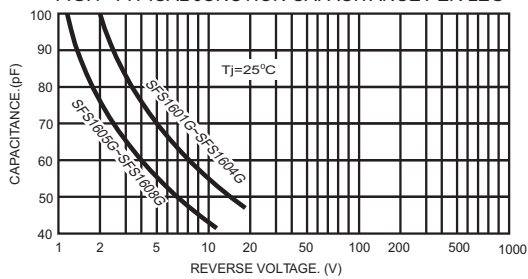


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

