

SFR601 - SFR607

6.0 AMPS. Soft Fast Recovery Rectifiers

R-6

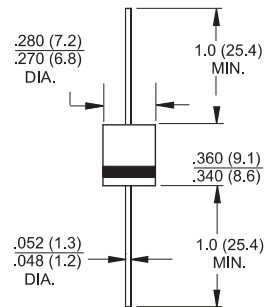


Features

- ✦ Low forward voltage drop
- ✦ High current capability
- ✦ High reliability
- ✦ High surge current capability
- ✦ Fast switching for high efficiency

Mechanical Data

- ✦ Cases: Molded plastic
- ✦ Epoxy: UL 94V-0 rate flame retardant
- ✦ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✦ Polarity: Color band denotes cathode end
- ✦ High temperature soldering guaranteed: 260 °C /10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✦ Weight: 1.65 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	SFR 601	SFR 602	SFR 603	SFR 604	SFR 605	SFR 606	SFR 607	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length @ $T_A = 55^\circ C$	$I_{(AV)}$	6.0							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 @6.0A	V_F	1.2							V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$	I_R	10 250							uA uA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	120			200	350		nS	
Typical Junction Capacitance (Note 2)	C_j	100							pF
Typical Thermal resistance (Note 3)	$R_{\theta JA}$	35							°C/W
Operating Temperature Range	T_J	-65 to +150							°C
Storage Temperature Range	T_{STG}	-65 to +150							°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 Volts D.C.
 3. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.

RATINGS AND CHARACTERISTIC CURVES (SFR601 THRU SFR607)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

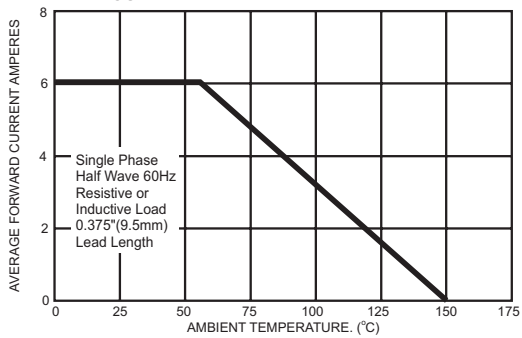


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

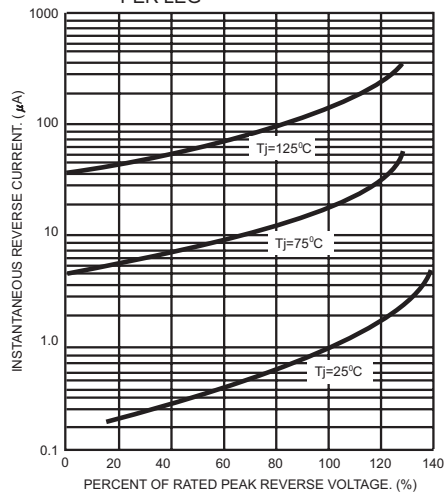


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

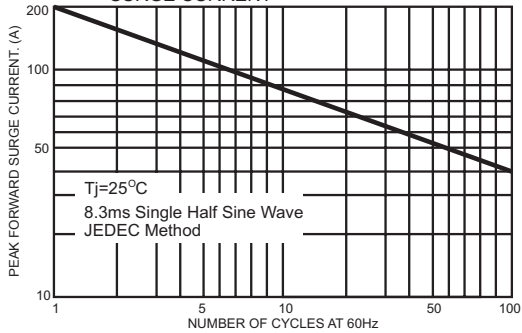


FIG.5- TYPICAL FORWARD CHARACTERISTICS

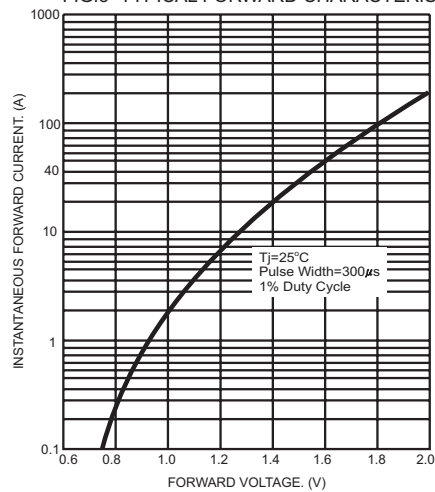


FIG.4- TYPICAL JUNCTION CAPACITANCE

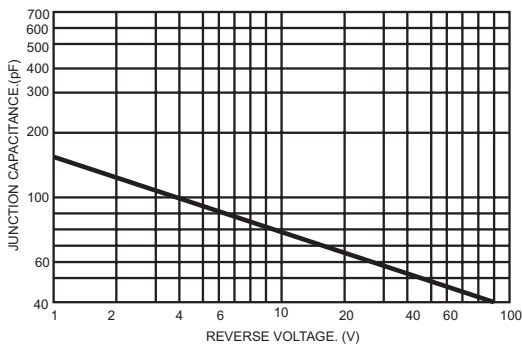


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

