

# SFR601 – SFR607

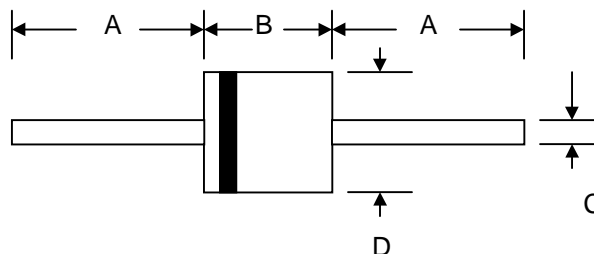
## 6.0A SOFT FAST RECOVERY RECTIFIER

### Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability

### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 2.1 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Epoxy: UL 94V-O rate flame retardant



R-6		
Dim	Min	Max
A	25.4	—
B	8.60	9.10
C	1.20	1.30
D	8.60	9.10
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

Characteristic	Symbol	SFR601	SFR602	SFR603	SFR604	SFR605	SFR606	SFR607	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>								
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @T <sub>A</sub> = 55°C	I <sub>O</sub>	6.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	200							A
Forward Voltage @I <sub>F</sub> = 6.0A	V <sub>FM</sub>	1.2							V
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C	I <sub>RM</sub>	10 200							μA
Reverse Recovery Time (Note 2)	t <sub>rr</sub>	120				200	350		nS
Typical Junction Capacitance (Note 3)	C <sub>j</sub>	100							pF
Operating Temperature Range	T <sub>j</sub>	-65 to +125							°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150							°C

**\*Glass passivated forms are available upon request**

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case

2. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A. See figure 5.

3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

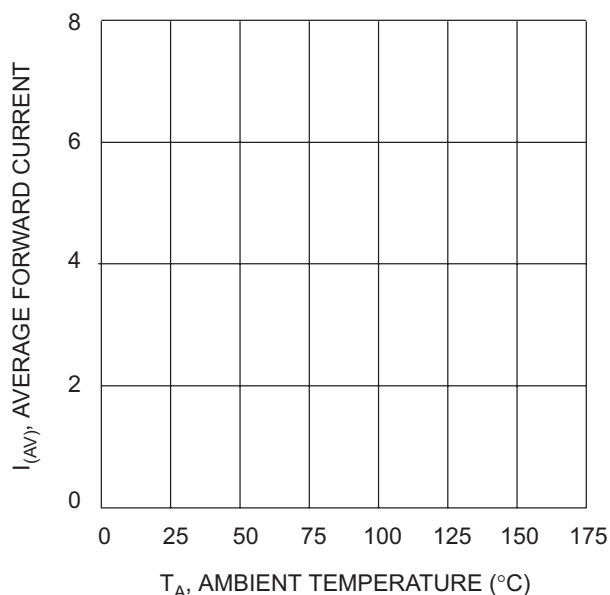


Fig. 1, Typical Forward Current Derating Curve

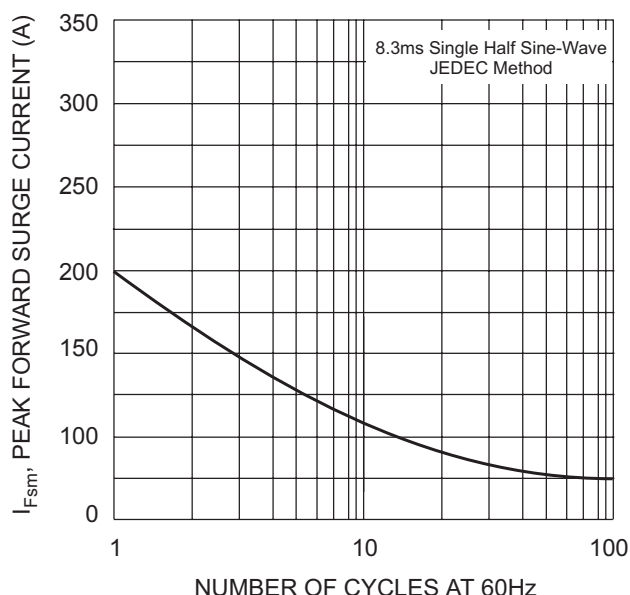


Fig. 2 Max Non-Repetitive Peak Surge Current

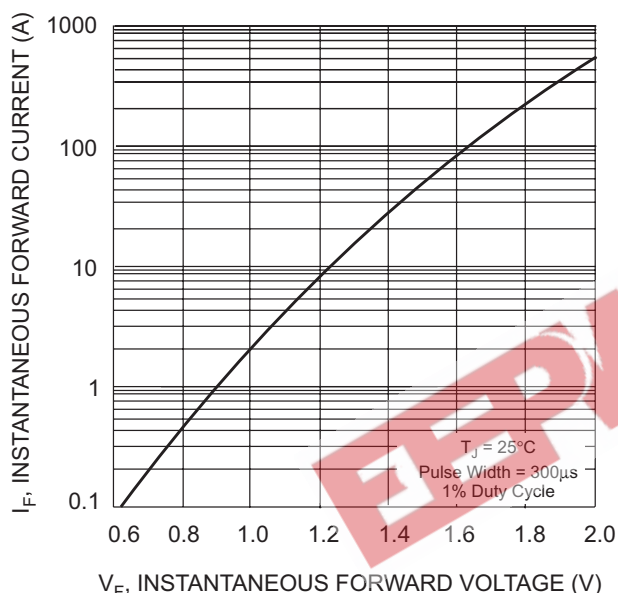


Fig. 3, Typical Instantaneous Forward Characteristics

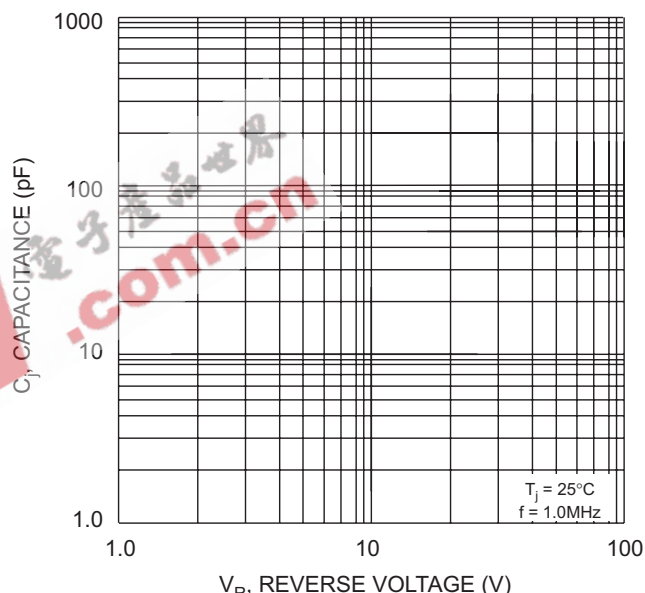
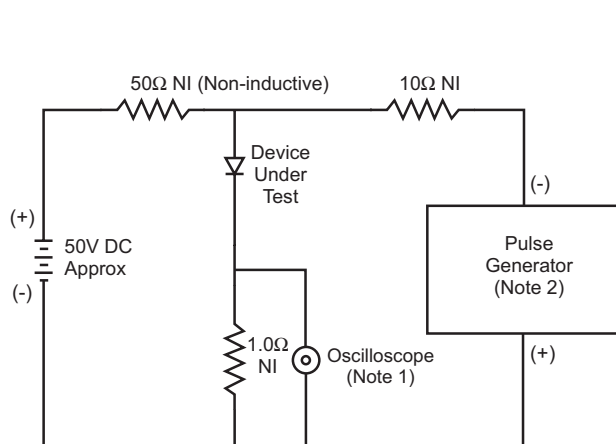
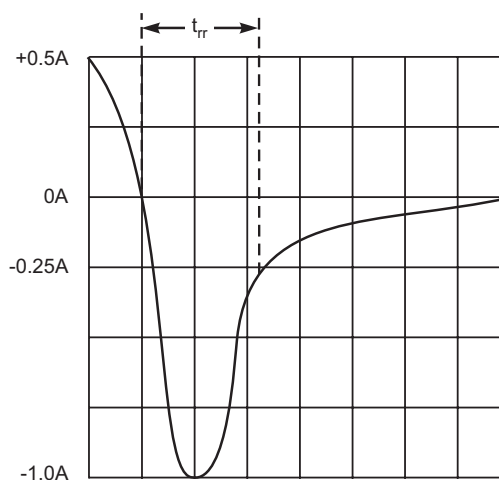


Fig. 4 Typical Junction Capacitance



Notes:

1. Rise Time = 7.0ns max. Input Impedance = 1.0M $\Omega$ , 22pF.
2. Rise Time = 10ns max. Input Impedance = 50 $\Omega$ .



Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## ORDERING INFORMATION

Product No.◆	Package Type	Shipping Quantity
<b>SFR601-T3</b>	R-6	800/Tape & Reel
SFR601	R-6	250 Units/Box
<b>SFR602-T3</b>	R-6	800/Tape & Reel
SFR602	R-6	250 Units/Box
<b>SFR603-T3</b>	R-6	800/Tape & Reel
SFR603	R-6	250 Units/Box
<b>SFR604-T3</b>	R-6	800/Tape & Reel
SFR604	R-6	250 Units/Box
<b>SFR605-T3</b>	R-6	800/Tape & Reel
SFR605	R-6	250 Units/Box
<b>SFR606-T3</b>	R-6	800/Tape & Reel
SFR606	R-6	250 Units/Box
<b>SFR607-T3</b>	R-6	800/Tape & Reel
SFR607	R-6	250 Units/Box

Products listed in **bold** are WTE **Preferred** devices.

◆T3 suffix refers to a 13" reel.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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