



Soft Fast Recovery Rectifier

Features

- Fast switching speed for high efficiency
- Low reverse leakage
- High forward surge current capacity
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length
- RoHS and REACH Compliance

Mechanical Data

Case:	Transfer molded plastic
Polarity:	Color band denots cathode end
Epoxy:	UL94V-0 rate flame retardant
Lead:	Plated axial lead, solderable per MIL-STD-202E method 208C
Mounting position:	Any
Weight:	0.07 ounce, 2.0 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	SFR601	SFR602	SFR603	SFR604	SFR605	SFR606	SFR607	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
VRMS	Max RMS Voltage	35	70	140	280	420	560	700	V	
VDC	Max DC Blocking Voltage	50	100	200	400	600	800	1000	V	
I(AV)	Max Average Forward Rectified Current	6.0							A	TC=55°C
IFSM	Peak Forward Surge Current	300							A	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-55 to +125, -55 to +150							°C	
Rθ-JA	Typical Thermal Resistance	10							°C/W	Note 2

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	SFR601	SFR602	SFR603	SFR604	SFR605	SFR606	SFR607	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.3							V	6.0A
IR	Max DC Reverse Current at Rated DC Blocking Voltage	25							μA	TA=25°C
		1.0							mA	TA=100°C
TRR	Maximum reverse recovery time	100		150		200			nS	Note 1

Note:

1. Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
2. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted

SFR601 ~ SFR607

RATINGS AND CHARACTERISTIC CURVES SFR601 THRU SFR607

FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

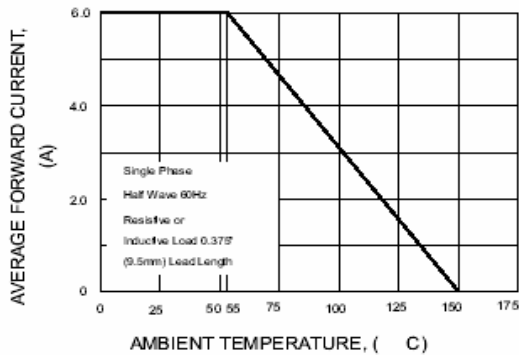


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

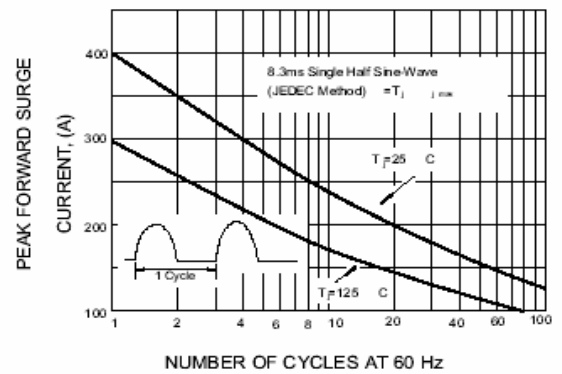


FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

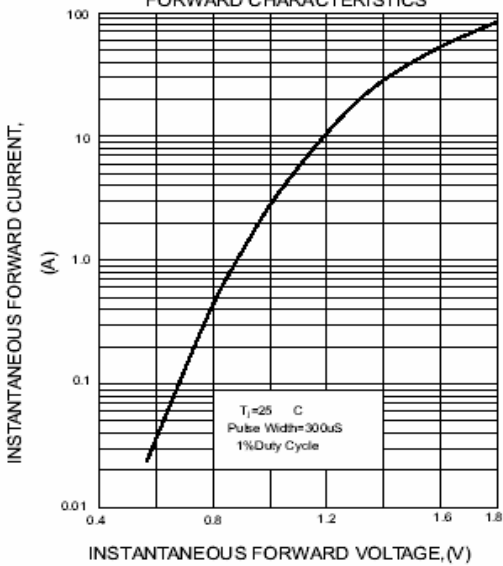


FIG.4-TYPICAL REVERSE
CHARACTERISTICS

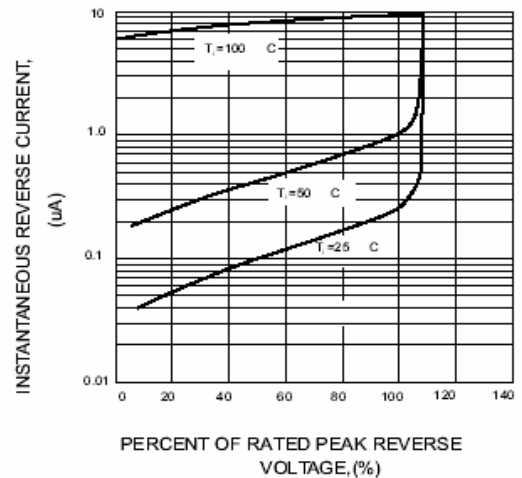


FIG.5-TYPICAL THERMAL RESISTANCE

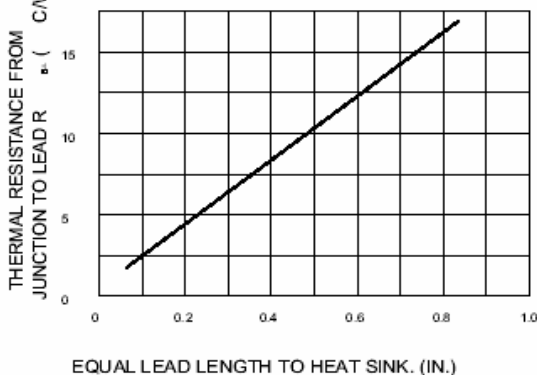
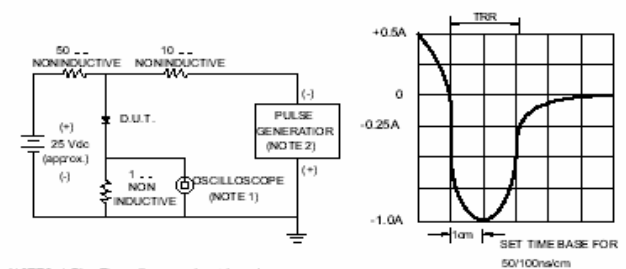


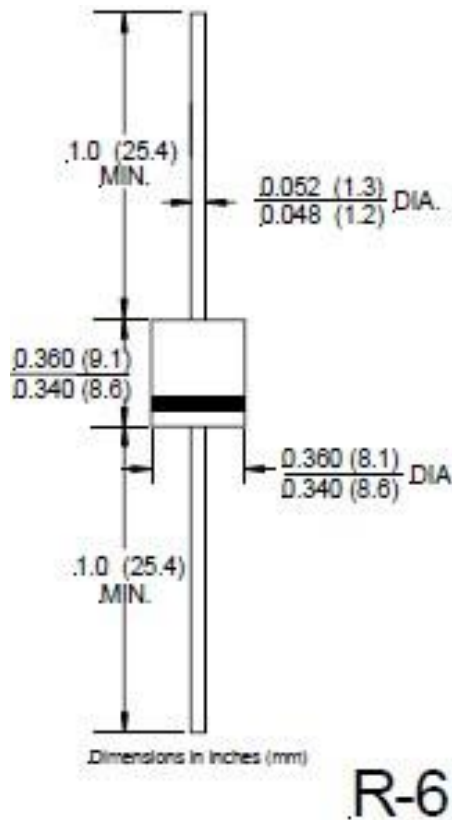
FIG.6-TEST CIRCUIT DIAGRAM AND
REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm, 22 pF
2. Rise time = 10ns max. Source Impedance = 50 ohms

SFR601 ~ SFR607

Dimensions in inches (mm)



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