



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:	0.042 ounce, 1.19 gram

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

Symbol	Description	SFR301	SFR302	SFR303	SFR304	SFR305	SFR306	SFR307	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	3.0							A	TC=55°C
IFSM	Peak Forward Surge Current	150							A	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-55 to +125, -55 to +150							°C	
Rθ-JA	Typical Thermal Resistance	22							°C/W	Note 2

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

Symbol	Description	SFR301	SFR302	SFR303	SFR304	SFR305	SFR306	SFR307	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.3							V	3.0A
IR	Max DC Reverse Current at Rated DC Blocking Voltage	10							μA	TA=25℃
		500							mA	TA=100℃
TRR	Maximum reverse recovery time	100		150		200			nS	Note 1
CJ	Typical Junction Capacitance	30							pF	Measured at 1.0MHz / 4.0V

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

SFR301 ~ SFR307

RATINGS AND CHARACTERISTIC CURVES SFR301 THRU SFR307

FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

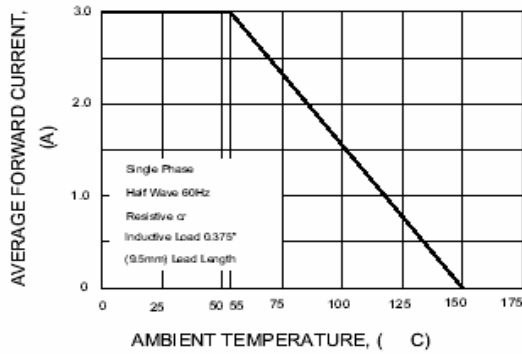


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

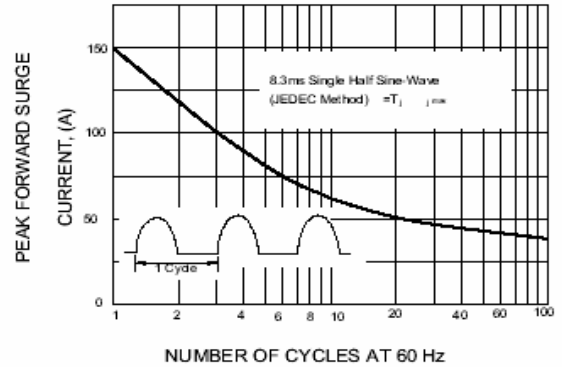


FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

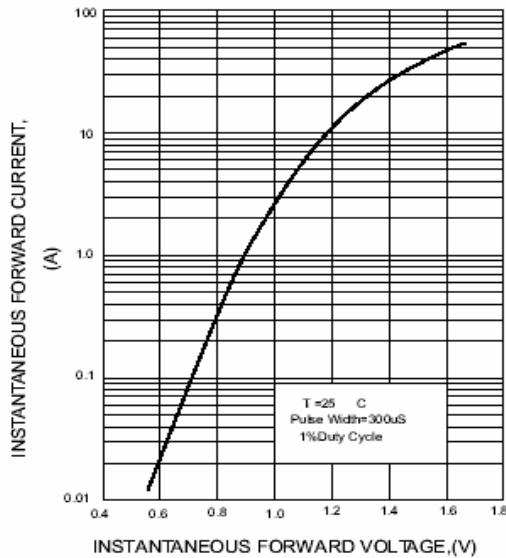


FIG.4-TYPICAL REVERSE
CHARACTERISTICS

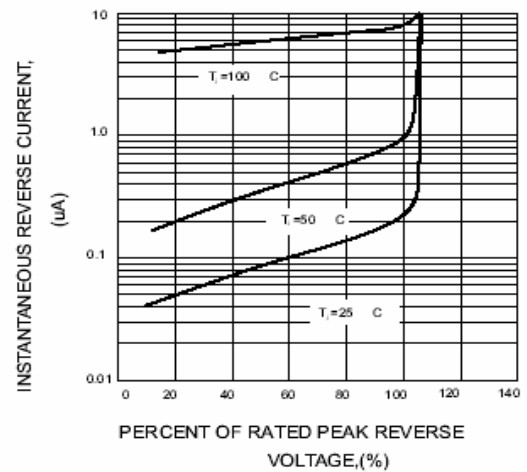


FIG.5-TYPICAL JUNCTION CAPACITANCE

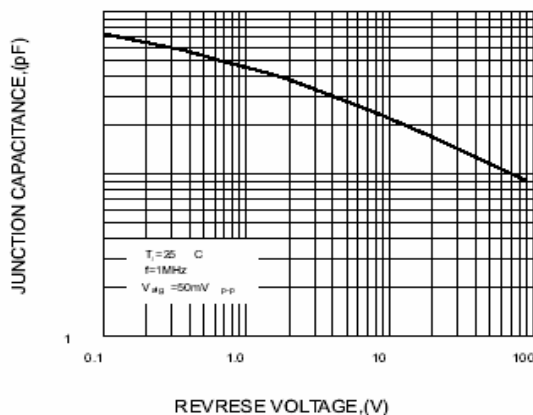
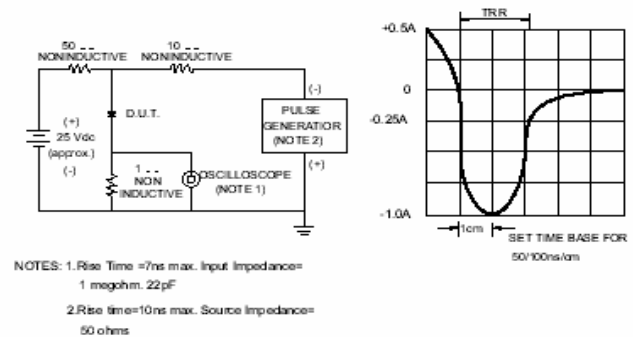
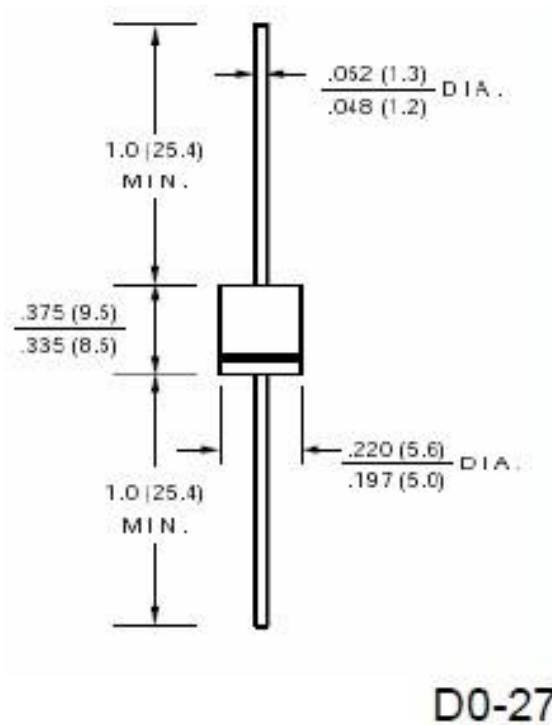


FIG.6-TEST CIRCUIT DIAGRAM AND
REVERSE RECOVERY TIME CHARACTERISTIC



SFR301 ~ SFR307

Dimensions in inches (mm)



Contact us:

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